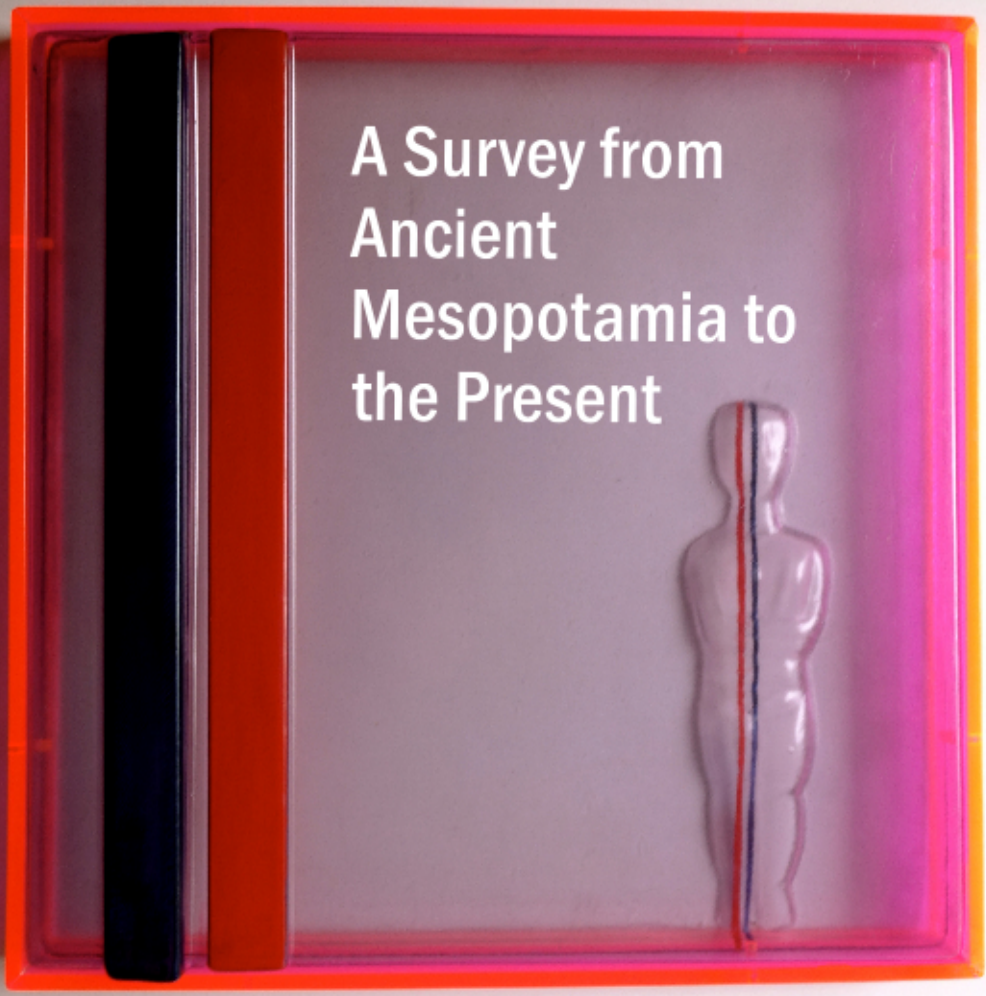
Colour in Sculpture



A Survey from Ancient Mesopotamia to the Present

Hannelore Hägele

Colour in Sculpture

Colour in Sculpture:
A Survey from Ancient Mesopotamia to the Present

By

Hannelore Hägele

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by Hannelore Hägele

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For Dominique

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INTRODUCTION

The content of the presented volume is culture or period based and takes the reader diachronically through roughly five millennia. In each of the eleven chapters a number of selected works are discussed that exemplify the circumstances for sculpture-making peculiar to the culture or period represented. Within each cultural framework we look for characteristics that suggest reasons for colour in sculpture. While some will be constant, others will be indicative of local preferences, customs or requirements.

How do we perceive sculpture and what notion do we entertain when thinking of it? Perhaps we may remember the tactile and spatial qualities of sculptural works we have seen, or recall a dictionary definition such as "Sculpture is the art of forming representations of objects in the round or in relief." It is likely that form rather than surface finish will spring to mind when we are prompted to describe what we have seen. As most of our experience of sculptures tends to come from books rather than from direct encounters with works of art, we may even imagine their finish to be any shade between black and white, like that of their photographic reproductions. Had we been shown a colour photograph or gone to see a piece of sculpture we would have acquainted ourselves with other dimensions, dimensions that only colour can reveal.

When referring to colour in sculpture we may mean either the colour peculiar to the material from which the work has been made, or the tonal values created by the interplay between light and shade on the surface of the object, or – more likely – the polychrome finish with which the sculptor intended to conclude his statement.

Any surface treatment is liable to change, losing something of its original appearance. Thus we also lose some valuable clues to the sculptor's intention at the time of completion. Are we ever in a position fully to perceive what the artist conceived and intended? This raises a number of crucial questions to which we shall have to return during the course of this discussion. What are we meant to see? What do we think we see? And what do we actually see?

More than five thousand years of sculptural activity allow us some insight into how different cultures at different periods approached polychromy. We can still respond to the *joi de vivre* of young and robust cultures, or perceive the intense concentration of power encoded in colour

symbolism. We may even detect shifts of cultural and social values in the way public and private monuments have been finished; their surface treatment may reveal not only the taste but also the beliefs of a people.

Whether we study ancient cult objects or the three-dimensional configurations of the present generation, they are expressions of their own time and embody the intentions of creative individuals and the culture to which they belonged. To get to know what these intentions were involves much detective work; too often the evidence is scanty because the data have been destroyed or a great deal more of the spade work needs to be done and information gathered, sifted and analysed. Today, this involves a multi-disciplinary approach. Archaeologists, anthropologists, historians, philologists and scientists seek to retrieve what has almost been lost.

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The subject under discussion here has in part been well studied by scholars following their own line of research. A beginning was made when in the mid-eighteenth century an interest in classical art was rekindled after some important finds of classical sculptures were made. The most celebrated among these was the Laocoon group, held to be the original to which classical writers had referred although scholars later agreed to its being a Roman copy. Its reappearance inspired yet another generation of artists who saw their ideals embodied in classical Greek art.

When in 1755 J.J. Winckelmann published his essay "Gedanken über die Nachahmung der griechischen Werke in der Malerei und Bildhauerkunst", he set a debate in motion which would last well over one hundred years. To Winckelmann form was of the essence of classical sculpture and consequently he ignored the issue of colour. Some of his followers, in particular Gotthold Ephraim Lessing, spoke out on the subject of colour by asserting that polychromy was in fact foreign to the classical ideal.

A French scholar, equally influential, tried to put the record straight with his impressive work *Jupiter Olympien* … (1815). Quatremère de Quincy pointed out that in Ancient Greece colour on architecture and sculpture played an important role. He instigated a more thorough investigation. A number of ancient sites were examined, sketches were made and colourful reconstructions were presented to the public. The controversy thrived; a succession of papers, many in German, but also some in French and English, were published in diverse journals as time went on.

Meanwhile, sculptors followed their own ideas and ideal of the past, searching for the purest form in the purest of material, white marble.

Neoclassicism was at its height. However, in 1884 the debate took a new turn. In a public lecture the archaeologist and museum director from Leipzig, Georg Treu, read his paper "Sollen wir unsere Statuen bemalen?" in anticipation of an exhibition in Berlin the following year, for which he was responsible. He planned a display of polychromed sculptures of different periods. By posing the question of whether we should paint our statues he also dared his young contemporary sculptors to re-examine their position regarding polychromy. By the end of the nineteenth century colour had begun to seep back into the pale forms of a "sleeping beauty". But the kiss of revival came from young sculptors' "experiments". Notably, Max Klinger's work took the public (whose taste was for everything "classical") by surprise. And yet his polylithic figures, new and exciting as they were, owed much to the past. (The use of a variety of coloured stones for his sculpture *Cassandra* was an idea Klinger derived from ancient Roman statuary.)

While Quatremère de Quincy had devoted his time and energy to Greek and Roman antiquity, and to the problem of polychromy, the Englishman C.A. Stothard was searching for a better understanding of the past closer to his own time and nearer home. In 1817, two years after Quatremère's publication, he had produced two superbly illustrated volumes under the title *The Monumental Effigies of Great Britain*. The colour-plates were based on the close study he had made in France of the royal tombs at Fontevrault. These were still fully polychromed at the time when he had discovered them in their storage place, forgotten and neglected. The English effigies, which Stothard had made known to a wider public, were later handed over to restorers. Queen Victoria, who disliked polychrome sculpture, wanted their colours to be removed and to have gilt applied instead. Her taste, and the taste of her age, set the tone for an era which was, during the latter part of her reign, quite restrained.

It is an interesting phenomenon of the nineteenth century that, particularly in England, a return to the aesthetic and spiritual values of the Middle Ages should have left nothing more in its own wake but a sober and austere legacy. The Gothic revivalists had largely ignored one of the most important features of medieval art: polychromy. The spirit of an age may be sampled and copied but it cannot be relived. One particular dimension of colour is its symbolic value, which every age has to redefine; like currency, it rises or falls according to a people's emotional and spiritual strength.

Polychromy in Greek sculpture continued to preoccupy the minds of twentieth-century archaeologists and writers. In 1944 the archaeologist Gisela Richter's introductory remarks to her article on the subject

summarised well the state of affairs younger scholars have inherited. She wrote:

> There are few subjects in the field of ancient art which have aroused such heated and prolonged controversy as polychromy in Greek sculpture. In looking over the archaeological literature of the past century we find the theme taken up again and again from different points of view and we realise how long it was before the fact became established that the Greeks coloured their sculptures. The idea of painted statues somehow filled people with horror, and only after the evidence in its favour had become overwhelming did the supporters of white unpainted sculpture give up their case.
>
> The strong prejudice was of course natural. Ever since the Renaissance artists had produced white marble sculpture, in imitation, oddly enough, of the Greek and Roman examples which they knew and which in the course of time had lost their colouring.[1]

A Swedish scholar, Patrick Reuterswärd, published in quick succession two important studies on polychromed sculpture. These were his *Studien zur Polychromie: Ägypten* (1958) and his *Studien zur Polychromie: Griechenland und Rom* (1960), with which he settled the long drawn-out debate on polychromy in ancient times – at a moment when colour in sculpture became once again a live issue.

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If the first half of the twentieth century will be remembered especially for its dark and gruesome years, when nations were left shattered and the dead heaped up like rubble, hope would not let itself be buried. Since the 1960s the colours of the rainbow could be seen emblazoned everywhere, beginning with the flags of the United Nations. Bright industrial colours gave gloss to things recycled and to newly made products, including sculpture. Indeed, in art colour almost assumed a life of its own by slipping in and out of form or frame, redefining the object and its space. There were many cross-overs between painting and sculpture before even these expressions were superseded. The rawness of the material world, and of society, also began to encroach on the viewer's experience and sensibility. Decay and hyper-realism are strands of the new in colour in sculpture. Rust finishes of huge metal sculptures, on the one hand, and sculpted and coloured mirror images of everyday subjects, on the other, challenge the viewer as never before in searching what may be the acceptable boundary of art.

Challenges of a different kind also emerged, namely how to retain and conserve polychromy, and, embedded in it all, how to extract valuable information related to the culture and the period from which a polychromed object came. These are the tasks of the art historian and the conservator alike who, in tandem, have opened up a vast research field during the last century. Polychromy is no longer just the concern of the antiquarian, for much essential and related work has been done in conservation departments by specialists skilled in different sciences. However, we must acknowledge here the fact that this collaboration between the different disciplines resulted in the most exciting, and startling, displays of visual evidence; in specially mounted exhibitions the viewer comes face to face with colour reconstructions and thus begins to feel the power of polychrome sculpture and the possible reasons for its having been created. Although the settings cannot always be conjured up, we are ever more experiencing holistically the impact of ancient objects, cults and cultures through the advances of technology.

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A study of this nature has its advantages as well as its disadvantages. By drawing in the high points as on an imaginary map the reader hopefully gets a sense of how a landscape with its resources and different social demands had a bearing on the history of sculpture.

By choosing the discourse and settling on a path which to follow there is much to be discovered, but also much that one has to leave aside for when another opportunity arises. This was the case here when, for instance, I felt I could not do justice to the marvellous way in which eyes were represented in figurative art and contributed to the subject of colour in sculpture. Hence it became a separate topic for a follow-up book, shortly to be published. The same happened when I had to forego paying what was due to the dress of sculpted cult images, especially to the polychromy with its sometimes hidden meaning which will be discussed in a third book.

It is my personal satisfaction that some major art institutions in Europe and the USA took up yet another challenge by mounting exhibitions highlighting the importance of colour in sculpture. Extravagantly beautiful catalogues accompanied these exhibitions, and not least, each venue provided a forum for discussing this important subject.

Having dared to go on this intellectual journey by writing this book I now invite the reader to enjoy what is part of our common cultural inheritance.

Notes

[1] *AJA* Vol. 42 (1944).

CHAPTER ONE

ANCIENT MESOPOTAMIA: MATERIALS AND PLACES

> Each person made every effort to ennoble his cult image. The one gilded his god, the other covered it in silver. Another encased his idolic image with bronze because he was poor. Another again, who was still poorer, carved himself one of wood and painted it, so that it may please. And the one who could not even afford one of wood, bought himself a god from the potter to suit his means.[1]

Sculpture involves shaping materials. It also involves shaping ideas. Whether such forms are crude or well defined, they carry a meaning which the sculptor seeks to communicate. For this purpose he uses a material that enables him to express concepts in a visual and concrete language. As he depends on materials such as clay, wood, stone and metal, their abundance or scarcity inevitably has a bearing on his creative activity and the development of sculpture at large, as we shall see on closer examination.

To trace this development we must go back several thousand years. We can do this with the help of a (mental) map of Ancient Iraq and follow the flow of two rivers, the Tigris and the Euphrates, from north to south, from Anatolia (now Turkey) to the Persian Gulf. We notice that there is a discernible north–south divide in the way early settlers gravitated towards the more fertile areas on either side of the upper Tigris, and in the south, where they founded settlements and city-states on the expanse of land between these two major watercourses. More significant however, regarding the development of sculpture, is the geographical distribution of materials: in the north of Mesopotamia stone is easily available, but not so in the south where it is rare. There, however, clay and bitumen[2] are plentiful; they became the bricks and mortar of Babylonian civilisation.[3] Regarding other materials, neither the south nor the north has any local supply of metal or quality wood; these, as well as ivory and semi-precious stones, such as lapis lazuli, had to be imported from neighbouring countries or even from more distant lands.

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What evidence is there of colour in sculpture? Polychromed pottery and painted clay figurines of the fifth millennium BC have been found in places as far apart as Tell Halaf in the Fertile Crescent of the north towards Anatolia, and Tell al-'Ubaid near Ur in Sumer. Both places are situated on an important ancient trade route which may have been followed in the nineteenth century BC by the patriarch Abraham, who went from Ur to Haran, a few miles north-west of Tell Halaf. However, these painted clay objects belong to a much earlier period than that of the patriarchs.

Sumer and Akkad, Babylonia and Assyria, refer to successive cultures and geographically definable regions in Ancient Mesopotamia, which was occupied by different peoples at various periods in history. Each in turn produced a distinct and identifiable culture. Sumer is the most ancient civilisation that sprang up between the two rivers furthest to the south. The Sumerians were either displaced or absorbed by the Akkadian people who had settled in the lands adjoining their northern border. Although they spoke a different language, they adhered to much the same cult practices and forms of government. In time, the Babylonians brought these two smaller regions under their control and thus became the dominant power in southern Mesopotamia until they too succumbed to a mightier people. During the first millennium BC, the Assyrians outgrew their own city-state Ashur and reached out in nearly all directions, bringing many neighbouring kingdoms under their sovereignty. Their large-scale stone sculptures still speak of their strength and prowess. No civilisation was mightier than the Assyrians', yet they too lost their place among the nations in the battles for power.

Over a period of more than three thousand years, cultural development in Ancient Mesopotamia was formed and influenced by many people who were at one time geographically and ethnically separate and distinct, yet were governed by similar religious and economic forces. Their names have come down to us through ancient literature – notably the Bible, where we read of the Chaldeans who had settled around 1200 BC in Shinar, the land of Sumer. But long before the Sumerians began to build their city-states, the Akkadian-speaking people had established themselves to the north of Sumer, where during the latter part of the third millennium BC they had raised an outstanding dynasty. Akkad and Sumer were united under Babylonian rule. Thus, Babylon's pre-eminence in southern Mesopotamia lasted until the Babylonians were overrun by the Assyrians. In the words of one of their most powerful kings, Ashurnasirpal II (884–859 BC), they had conquered all countries and acquired dominion over the mountain regions and triumphed over all the countries from beyond the

Tigris to the Lebanon and the Great Sea.

There were the Hittites, Hurrians and Canaanites or Phoenicians fighting over or controlling lands along the north-western flank of Mesopotamia, with the periodic influx of the Egyptians. The east, the homeland of modern Iranians, was once peopled by the Parthians and the Medes, while in the most southern region the ever troublesome Elamites made their forays into Sumer and Babylonia. Parts of the Near East were finally, during the fourth century BC, invaded by the Greeks and thus the indigenous cultures came under a new and dominating influence. We shall here be concerned not so much with the history proper of Ancient Mesopotamia. Instead we shall concentrate on aspects pertaining to sculptural developments which will serve us as a basis from which to explore further the concept of colour in sculpture.

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The sketchily modelled terracotta figurines of the prehistoric Halaf period have the appearance of dolls, or represent strange hybrid creatures connecting the real with the fantastic. All essential features, whether humanoid or animal-like, have been roughly shaped in clay, while details such as eyes, hairs, body marks and other physiognomical characteristics have been painted on with bold brush strokes. Either black or red has been used to indicate rather than to imitate precisely what may have been the customary make-up, body decoration or adornment.

These hand-size models are among the earliest references that we know of to the age-old practice of body-painting, tattooing or scarification which seems to have been part of life in Ancient Mesopotamia, as they have been in more recent times. However, one of the two larger lime-plaster figures discovered in 1983 at Ain Ghazal, near Amman in Jordan, shows stripes on its upper leg which appear to be intentional paint marks. The half life-size figures have been dated to around 6500 BC. They are the earliest known representations of the human form.[4]

Initially such marks may have indicated ownership before they developed into decorative pattern or status symbols in their own right.[5] Clay figures offer scope for experimenting with and expressing new ideas, and colour application may have played an essential part in formulating concepts. Modern sculptors have found it useful to make *bozzetti*, or clay sketches, before committing themselves to working full scale in a more expensive and time-consuming medium. However, the Tell Halaf and al-'Ubaid figures have to be seen as the intended full expression, however roughly executed.

The Sumerian sculptor of the third millennium BC worked out a

method of combining different materials of contrasting colour value, with the effect of enlivening the sculpted image. Although his resources were limited, he was himself resourceful and explorative in his approach to creating unique pieces of sculpture. Monumental in their conception, they were however mostly on a small scale. As stone was precious and rare, he used the material sparingly. This may be best studied by a find made at Warka (Uruk) during the 1938–39 excavations. It is a limestone head or mask representing a woman, now known as the *Lady of Warka* (*c*. 3100 BC). It is probably one of the first near life-size pieces of sculpture known to us. Its incomplete state is interesting in itself. The archaeologist Seton Lloyd made the following observation about the use of material in relation to Sumerian sculpture with particular reference to this head:

> The contrivance of a life-size human figure in the round, to which this fragment bears witness at so early a date, is most remarkable, but its form suggests the material limitations of the period. There can be little doubt that the mask-form is accounted for by the scarcity and value of stone in the alluvial district of South Iraq. So that the head and probably the clothed parts of the body would be completed in some more easily obtainable material. Since wood is almost as rare as stone, one must look for some other substance of which the local supply is plentiful, and the most suitable is obviously bitumen. Remembering, for instance the lions heads from the façade of the Nin-harsag temple at al-'Ubaid' composed of fine copper-plating over a core of bitumen, it is not difficult to imagine our Warka head completed by a core [of bitumen], forming the basis for a *coiffure* modelled in some more valuable material.[6]

The head has lost all its incrustation. The eyes, eyebrows, hair and side-locks are missing. Thus it has also lost its colourful and life-enhancing expression. The mask-like face looks severe, partly because of the tight, unsmiling lips, but also because the dark eye sockets offer no focus. But what might the image of the *Lady of Warka* have looked like? Again, we are helped by the scholarly approach brought to such a problem. A reconstruction of the head was made and Seton Lloyd was then able to present his final deductions:

> The assumptions on which the reconstruction was based were accordingly as follows:
> a) That the hair was modelled in thin gold over a bitumen base. The gold would extend over the flat frontal waves and so cover the two rivets near the parting attaching the stone to the bitumen.
> b) That the coiffure may be adopted from the most characteristic hair dresses among the Diyala heads.
> c) That the rivet-holes in the temples were for attaching side-locks, also

made of bitumen covered with gold.
d) That the projection beneath and behind the ears represent the ends of a roll of short hair which almost invariably occurs beneath the chignon. The rivet-holes, for attachment of the bitumen, would also be covered by the extension of the gold over them.
e) That the parting was inlaid with bone or mother-of-pearl, which helped to secure the gold, and the eyes and eyebrows with lapis and bone, as is usual with Sumerian statues.[7]

Altogether, it is a well-planned work and its effect must have been as startling as its modern reconstruction for the Iraq Museum. The result is interesting and highly probable, but it reveals that the possibility of different interpretations exists and that we shall never know for sure about the appearance of the *Lady of Warka*.

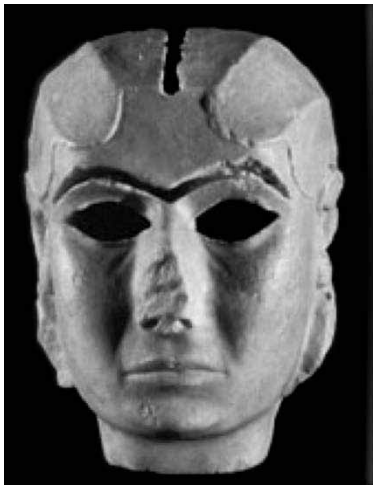

Fig. 1–1, left. Clay figurines from Ur (*c*. 4500 BC), typical of the Ubaid culture in southern Iraq. Figure on the right h. 13.6 cm.

Fig. 1–2, right. Head of *The Lady of Warka* (*c*. 3100 BC); h. 21.2 cm. © Photo: D. Collon.

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We can study our own response to Sumerian craftsmanship when visiting the British Museum. There, on permanent display are – among other finds from Sumer – objects which Sir Leonard Woolley recovered

from the Royal Cemetery of Ur. One of these is the *Ram in the Thicket*. It demonstrates fully the capability of the Sumerian craftsmen and gives an indication of their inventiveness and their determination to obtain the necessary resources at whatever cost.[8]

The Ram in the Thicket may remind us of the biblical story of Abraham, who found in the thicket a ram which he used instead of his son Isaac as a sacrificial offering. This cult object, worked seven centuries earlier and dating from about 2600 BC, is, like most works of art in Sumer and Akkad, relatively small in scale, barely half a metre in height (but when seen in photographic print one may easily mistake its size for that of a living ram).[9] Gold, silver, lapis lazuli, shell, copper and bitumen are the materials that give it its multi-coloured appearance. The sculptor worked out a scheme based roughly on the characteristic features of the animal: finely modelled head and legs, showing the taut skin stretching over the bony structure. The legs and sexual parts are covered in gold leaf, as is the thicket. The inlaid eyes are of shell and lapis lazuli, a material also used for the horns and upper part of the fleece. The ears are made of copper, now green. Shell pieces emulate the heavy fleece of the lower part of the body. However, for the underbelly the silver (now lost)[10] would have suggested a difference in quality and growth. The little platform on which the ram and the tree-like support are mounted has a regular pattern of inlaid squares of mother-of-pearl and limestone; their colours range from cream to red and blue. The brightest pink or red, while not yet part of the figurative element of the piece of sculpture, points to the fact that red is one of the most dominant colours in Ancient Mesopotamia. The archaeologist Anton Moortgat referred to the tendency to piece together such images by combining and using different materials for different body parts, thereby introducing colour contrast, or adding extra colour by inlays of semi-precious coloured stones.[11] Lapis lazuli's great popularity came during the Early Dynasty III, the period which produced the great treasure found in the Royal Cemetery of Ur, when links between Sumer and the east were particularly close. Never again was lapis lazuli to be used so effectively and so lavishly. The Badakshan mines in Afghanistan were the principal source for the semi-precious stone. Trade in this prestigious commodity once spread throughout the Near and Middle East; it may have taken the merchant caravans three months to cover the 1500 miles between Afghanistan and Sumer. Scientific analysis has shown that the varying shades of blue of the pieces of veneer on the *Ram in the Thicket* are paralleled by modern specimens from Badakshan. The blue semi-precious stone was both desirable in its solid state and much valued as a pigment, which since the Middle Ages has been known as ultramarine.[12]

The Sumerians made a virtue out of necessity. Their recognition and acceptance of the enhancing quality of combined materials, each being worked to its own full advantage – as in the chasing and polishing of precious metals, or the cutting and inlaying of mother-of-pearl – added character to their sculpture, which might otherwise have remained a crude art form. (Later, the Ancient Greeks, who had plenty of stone, recognised the beauty of artfully combining gold and ivory and by giving chryselephantine sculpture its full aesthetic expression.) Not only were the Sumerians able to handle the technical problems involved in joining diverse materials; their aesthetic sensibility was founded on their understanding of each material's intrinsic quality and potential. They also understood, as the *Ram in the Thicket* shows, how to relate to and substitute for nature's attributes. The velvety dark blue of lapis for the softness of hair, the iridescence of shell for moistness of eyes, tersely modelled and polished form for skin over bone, all indicate astute observation and intelligent application of what they knew.

If their stone carvings look less schooled and daring than what we find later in Assyria and other neighbouring cultures, who had recourse to plenty of good stone, it is as well to remember that they were deprived of an essential training ground in carving blocks or slabs of stone.

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We have already seen that crudely modelled clay figurines from the pre-dynastic period (5000–4000 BC) were partially painted with either a red or black colour. The paint was used to pick out particular features rather than to colour larger surface areas uniformly. The brush marks indicated bodily traits such as hair, eyes, tattoo marks and jewellery. This exchange of media for the sake of creating a fuller expression is also found on limestone and terracotta sculpture of later periods, particularly towards the end of the third and the beginning of the second millennia BC in Sumer and Babylonia. However, these statues were more fully painted in order to suggest the actual colour of skin, hair or dress, whereas the eyes were frequently inlaid when not modelled and painted.[13] Despite the fact that added pigments easily rub off and are lost forever, we have some good examples of polychromed statues which verify the practice of painting sculpture in Mesopotamia, and traces of pigment have been found on quite a few sculpted fragments and on statues which appear monochrome.

The stone statue of a woman worshipper from Ur (about 1900 BC), which is in the British Museum, still shows some of the once glowing red with which the modelled dress top and neck jewellery has been painted. Her hair and carefully carved inlaid eyes, which have lost the black of the

iris, and also the regular folds of her dress, indicate that the paint has a different function; it is no longer taking over where the modelling tool or chisel fail to convey detail. The colour is there to complete in another sense: to brush on some life. Or perhaps the colour is used to reflect the life-giving spirit of the god to whom this worshipper is perpetually praying in the temple on behalf of the donor worshipper.

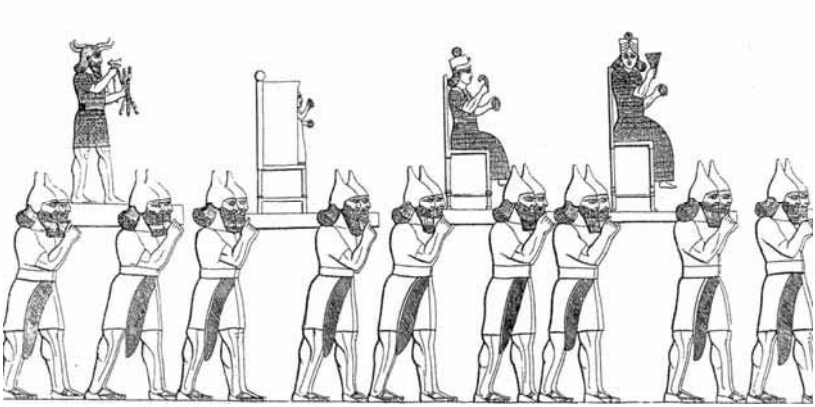

Fig. 1–3 Warriors carrying idols in procession, South-West Ruins, Nimrud. Drawing by A.H. Layard: *A Popular Account of Discoveries at Nineveh* (1852).

The original settings of most Sumerian sculptures were temples and sanctuaries. The social and religious structure of such city-states as Ur and Uruk evolved around their cult centres, the temples of their state gods and other deities, of which there were many. Their pantheon was hierarchically ordered; according to their specific needs the supplicants installed votive figures in their temples. The people also offered their gods sustenance and generally contributed to their well-being. The deities had to be regularly fed, washed, anointed and dressed, specifically so for the New Year Feast, when the statues were richly adorned, taken from their sanctuaries and carried in processions through the streets. They were also taken to visit other gods on appointed days. On these occasions the street scenes were as rich in colour as they are today during saint's days in any of the Roman Catholic countries in southern Europe or South America.

We know from ancient records and inventories how the love-goddess of Sumer, Inanna-Ishtar, presented herself on a feast-day. A poet left us this description:

The *šugurra*, crown of the plain, she put upon her head,
Locks (*of hair*) she *fixed* upon her forehead,
The measuring rod (and) line of lapis lazuli
she gripped in her hand,
Small lapis lazuli stones she tied about her neck,
Twin nunuz-stones she fastened on her breast,
A gold ring she put about her hand,
The breastplate "Man, come, come!" she
Bound about her breast,
With the *pala*-garment, the garment of ladyship,
she covered her body,
The ointment "He (the man) shall come, he
shall come," she daubed on her eyes,
Inanna walked toward the netherworld,
Her minister Ninsubur walked at her [*side*]. [14] [15]

We also know what Ishtar of Lagaba owned, because the contents of her treasury were recorded on clay tablets that itemise every piece of jewellery, garment, woollen or flaxen ribbon and, of course, the "dress of Inanna", which was kept in safe keeping under the superintendence of Awil-Ishtar and two other officials at the temple of the god Isarkidisu.

Although there is no direct reference to any particular colour on these objects, the ancient scribe did state all the materials of which each item was made, with the exception of the seals. The statue was adorned with jewellery and ornaments made of gold, silver, copper, bronze, lapis lazuli, carnelian and ivory, materials which guaranteed a wide colour spectrum and a rich, sparkling effect.[16]

Whether the recorded three great coats of linen were white, orange, red or any other shade is more difficult to establish. However, red played an important part in ceremonies. From another record we learn that at Babylon during the New Year Festival, which lasted eleven or twelve days, three artisans were summoned on the third day and provided with the materials to make two statuettes of wood adorned with precious stones and clad in red garments.[17] We may recall that the stone statue described above also wore a red garment. Further evidence comes from Ur where, during the excavations of the Royal Cemetery, Sir Leonard Woolley found a small fragment of red material. Though we do not know who was buried,[18] we know they wore red dresses during this final ceremony of burial, which also was to be their last hour alive.[19] [20]

Ishtar of Lagaba also possessed seven "beautiful gowns" of which two were new additions, two loin cloths and two *kaunakes* or sheepskins. Again, the list does not give any clue to their different appearances and uses. It is known however that Inanna-Ishtar was worshipped not only as

the goddess of love, but as the goddess of fertility and the mother of life[21] and the goddess of war. She was also the patroness of the palace. For each aspect of her divinity she may have required a distinct outfit by which the worshippers could recognise her deified status.

We have evidence that ritual clothing of the images was an important and very old feature of the Mesopotamian cult.[22] Its significance to our investigation becomes apparent when we turn to a much more recent ritual text from Uruk (period of the Seleucids, third century BC) which refers to the same ritual practice and lists the jewellery and ornaments in the possession of the temple. It also indicates for which part of the body each item was meant and who crafted the object – that is, a blacksmith, jeweller, lapidary or carpenter. From this information the archaeologist W.F. Leemans deduced the following:

> In this period of the decline of Babylonian civilisation the same objects still occur, which had remained in use as a result of the persistency in the tradition of religious customs. The hand- and foot-rings were made by the blacksmith now, probably of iron and bronze. The *insabtum*, as in Ishtar's descent defined as ear-ornaments, were still made of precious metal. The neck-ornament [mentioned in line 20 of the Sumerian version] was now made of *sanctum* (carnelian). The *tudittu* (ornaments on her breasts) were no longer made of gold or silver, but of (painted) wood, like the bronze *sewiro* a sign of the impoverishment of the temples in the Seleucid period.[23]

Such an adaptation to an economic situation may be observed in different cultures and during different periods (Greek, medieval), but it should be noted that the changes due to economic circumstances work both ways and lavishly rich endowments may precede and succeed periods of decreased riches.

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Before leaving the temple compounds, from which so much of the cultic and symbolic thinking and practice emanated, we picture the approach of a worshipper who, from the entrance, makes his way to the sanctuary. Ahead of him, in the shaded sanctuary, the cella, the statue of the deity acts like a magnet. The highly polished surfaces of its precious metals and the sparkling jewels add to the awe-inspiring image of the mystical god figure whose forms, in all probability, instil more fear than love, while he fixes his gaze on the penetrating eyes of inlaid shell whose iridescent whiteness glimmers in the semi-darkness. Around the statue numerous votive figures are positioned (the tallest shown here is 72cm in

height). These conical or column-like figures stand their ground rigidly, with folded hands at chest level, their wide shoulders and pointed elbows held away from their bodies. Some are bald and beardless while others have their carved hair and wavy beards painted black. But the most notable feature is their eyes; these large, flat discs are out of all proportion with the rest of the face. They are inlaid with shell and bitumen or lapis, which provide them with focal points through which the divine communication was meant to take place.

Fig. 1–4 Votive statues from Tell Asmar (*c*. 2700 BC). Tallest figure h. 72 cm. Iraq Museum, Bagdad, and Oriental Institute, Chicago.

Outside the temple, in the glaring sun, there is colour everywhere: vegetation, sky, the temple's reflection in the water, people wearing brightly dyed dresses or bleached linen in contrast to their own body colours enhanced with kohl, senna and other shades. Some large buildings had their exterior walls clad with painted baked clay pegs. The foremost example is a columned building in the Eanna temple precinct at Uruk (about 3300 BC). The white, red and black peg heads were arranged in attractive patterns. Below the roof of yet another sanctuary a coloured frieze enlivened the stuccoed façade. The Sumerians and Akkadians, and

later the Babylonians, enjoyed and made the most of colours. To them colour was a divine expression of benevolence.

The building of ziggurats is one of the earliest manifestations of man's instinct to reach upwards towards heaven and outwards towards the universe. At Babylon, during the reign of Nebuchadnezzar II (605–562 BC), the Tower of Babel was being built and rose 90 metres from the ground into the sky. This ziggurat was called *E-temen-an-ki*, the House of the Foundation of Heaven and Earth. According to various records the edifice rose in seven stepped stages that were coloured, from the bottom up, in white, black, red, blue, orange, silver and finally gold. This last stage was a small temple.

Although Robert Koldewey, the archaeologist responsible for much of the early excavation of Babylon between 1899 and 1917, did not support the idea of a "coloured ziggurat" or, rather, its possible symbolic significance, we do owe to him an insight into another aspect of colour in art: multi-coloured enamelled brick reliefs. The Ishtar Gate and the Processional Way are the two monuments with which his name is especially linked; they are of particular interest to us because of their decorative schemes. Under Koldewey's direction the walls were gradually freed from the rubble of past ages and he discovered that the walls of the Ishtar Gate were faced with glazed bricks moulded in relief to only one storey and faced with alternating rows of coloured bulls and dragons,[24] the symbols of the weather god Adad and the patronal god of the city of Babylon, Marduk. The facing walls on either side of the Processional Way were moulded with rows of the lion symbol of Ishtar, the goddess of war. A brilliant blue, reminiscent of lapis lazuli, served as a background for the whites, light blues, yellows and reds. (The reds are now green because of the oxidation of the ferrous colour pigments.)[25] The production of at least 350 large-scale reliefs based on three different designs – bull, dragon and lion – bespeaks considerable technical and organisational competence. Each image is composed of dozens of bricks.[26] First the bricks had to be separately moulded, then they had to be reassembled after the first firing. The outlines of all the colour areas could be drawn, or laid on, with black glass filament before the individual colours were then filled in, a technique similar to cloisonné. Wet clay shrinks considerably during the drying and firing processes. One has to admire the precision with which the ancient craftsmen prepared not only the moulds but also the colour mixtures for the glazing and, not least, how diligently they supervised the firing process.

The Babylonians under Nebuchadnezzar II achieved a high quality of colour enamelling, but the technique itself was not new. In the second half

of the second millennium BC the Kassite kings of Babylonia and the Elamite kings of south-western Iran produced moulded brick reliefs with figures of gods and goddesses. In the first millennium the Elamites experimented with glazed reliefs of this type. The Kassite kings had rebuilt and embellished many of the old sanctuaries. A new temple at Uruk was decorated with brick reliefs depicting deities. The French scholar Georges Roux conjectured that this ingenious technique, new to Mesopotamia at that time, was perhaps a substitute for rock carving. It was also used later by the Achaemenians in Susa.[27] The style of these moulded reliefs, as Koldewey pointed out, is quite different from the cut stone reliefs with their steeper sides, often at right angles to the flat surface of the background. He compared the brick relief with an impression made by a seal into the wet clay. Any mould has to release easily the still soft material without doing damage to the image. Slightly sloping sides and no undercuts are therefore characteristic of this type of relief.

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So far our examples of polychromed sculpture have come from the south of Mesopotamia. This is not only for historical reasons, but also because, as we move north and to Assyria, we find a different setting and different way of thinking about sculpture. Between the tenth and the seventh centuries BC, the Neo-Assyrian kings were at the absolute height of their power. The excavated ruins of their cities and the monuments therein still testify to this. The mere mention of their names conjures up a picture of political absolutes and frenzied activities. The capital of Ashurnasirpal II was Nimrud (ancient Calah) and his palaces were decorated with huge stone reliefs showing his adventures in war and peace. Whether we look at the detailed carvings of captives being taken prisoner and deported or the king hunting lions, these pictorial annals (continuous narratives) are of a quite different order from what we have seen in Babylonia.

The material and the large scale are the two most significant physical aspects of Neo-Assyrian sculpture. There was no shortage of stone. The mountains where the blocks were quarried gave the Assyrians a sense of scale, and with the determination of true conquerors their immediate environment, their palaces, was transformed by these massive stones with their engraved images. Pairs of giant winged human-headed lion or bull figures were carved to guard important entrances, and a large statue of the ruler gave his people a new focal point. A different orientation of cult and worship had occurred. As in Babylonia, the king had a divine mandate and was seen to serve his god, temple and people. Ashurnasirpal II and his

successors for the next two centuries recognised the propaganda value of cult symbols and made these their own. (The mythological hybrid figure of a man that is part eagle and part bull or part lion has retained its symbolic significance even for us, although within a different contextual use, for we associate with these hybrid images the four evangelists of the New Testament.)

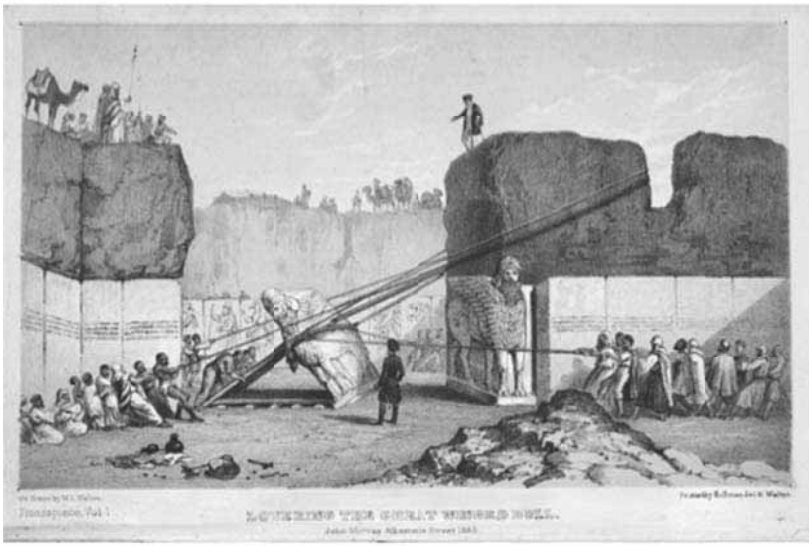

Fig. 1–5 Lowering the Great Winged Bull. Drawing by A.H. Layard (1848), as shown in *Nineveh and its Remains.*

The Assyrians were also skilled in bronze casting and, despite the fact that metals had to be imported, they worked extensively in this medium. However, like their predecessors, they periodically reused the metal of unfashionable statues which would deprive us of earlier examples of their bronze or silver casts. Destruction and looting, too, were as much of a problem as during other periods in history. Another destructive element, of course, is time itself. Either the wear and loss of finishes due to the decomposition of the material, or the staining of buried objects, inevitably alters the original appearance of works of art.

Seeing Assyrian stone carvings as they are in their present state, the museum visitor may assume that their bland stone colour, whether that of limestone or basalt, determined their original appearance. But our eyes quickly adjust to the monochrome surfaces of the reliefs and can pick out

the subtle surface variations of the low relief or follow the incised lines as we do a tracing.

Fig. 1–6 Winged human-headed lion, North-West Palace, Nimrud. Drawing by A.H. Layard.

Most of these upright stone reliefs, or orthostats, once decorated the interiors of palaces at Nimrud, Khorsabad and Nineveh and could be viewed from close proximity, as they can be now in museums. Every detail could be read and the development of the narrative could be followed as the onlooker walked along or faced the walls. The clear depiction of animate or inanimate objects resembles unbroken line drawings made with a stylus or an engraving tool. The sculptors paid attention to the various patterns, whether those of hairstyles, dress, the swirling waters of a river or the texture of plants. These compositions show verve, imagination and an ability to transfer observations made from nature into a hard medium. The haunting image of a dying lion shows not only realism but empathy with a creature's final struggle with defeat.

Fig 1–7 Carved orthostat depicting Ashurnasirpal II, the sandals still showing traces of paint. Acc. No. BM ME 124564. © Trustees of the British Museum, London.

Movement and dragging weight, uproar and anguish, motions and emotions, are all there and captured in this timeless image. The relief carvings introduce new visual concepts. In these panoramic fields of vision life unfolds scene by scene. The viewer participates in events and histories as his eyes follow the characters and actions portrayed. They are

different from the static images of deities or god-kings to which the worshipper did homage. The orthostats were designed to glorify the might of an earthly ruler.

Ashurnasirpal II did just that: he had his deeds told, not only in these carved low reliefs but also on a block of sandstone placed near the doorway to the throne room of his palace in Calah. The lengthy text tells of his various exploits and also how he "took over again the city of Calah" and built himself a palace:

> I erected as my royal seat and for my personal enjoyment (text: 8) beautiful halls … ; I sheathed doors … with bands of bronze; … I surrounded them [the doors] with decorative bronze bolts; to proclaim my heroic deeds I painted on their (the palaces') walls with vivid blue paint how I have marched across the mountain ranges, the foreign countries and these as, my conquests in all countries; I had lapis lazuli coloured glazed bricks made and set (them in the wall) above their gates.

From the same text, we gain further insight into his building programme and can judge with what pride Ashurnasirpal II refurbished the interiors of his palaces:

> I erected in Calah, the center of my over-lordship, temples such as those of Enlil and Ninurta which did not exist there before; I rebuilt in it the (following) temples of the great gods: the temples of Ea-sharru (and) Damkina, of Adad (and) Shala, of Gula, Sin, Nabu, Belet-nathi, Sibittu (and of) Ishtar-kidmuri. In them I established the (sacred) pedestals of the(se), my divine lords. I decorated them splendidly; I roofed them with cedar beams, made large cedar doors, sheathed them with bands of bronze, placed them in their doorways. I placed figural representations made of shining bronze in their doorways. I made (the images of) their great godheads sumptuous with red gold and shining stones. I presented them with golden jewelry and many other precious objects which I had won as booty.
>
> I lined the inner shrine of my lord Ninurta with gold and lapis lazuli, I placed right and left of it IM objects made of bronze I placed at his pedestal fierce *usumgallu*-dragons of gold. … I fashioned a statue of myself as king in the likeness of my own features out of red gold and polished stones and placed it before my lord Ninurta.

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The royal account is in marked contrast to the impression of the Assyrians' restraint regarding colour conveyed by their large-scale sculpture. King Assurnasirpal's description reflects not only his pride and narcissistic delight in a statue which he considered a good likeness of

himself, but also his pleasure in the decorative scheme of his palace, with no costs spared in having his might painted on the walls or engraved on stone slabs. His use of terms such as "vivid blue", "red gold" and "polished stones" reveals the ruler's sense of colour. Interestingly, he singled out blue, but then the blue of lapis lazuli was the most costly colour for painting, just as purple was for dyeing cloth.

But what are we, twenty-eight centuries later, to make of this description? Did he refer to actual wall paintings or to an entire decorative scheme which would have included the huge stone reliefs or orthostats that lined the length of the walls?

The Assyrian kings had vivid scenes painted on the interior walls of their palaces and temples, as we know from archaeological finds. Of these colour washes were made, and where possible samples were transferred to museums. Archaeologists noted that the monotonous grey-brown surfaces of the reliefs still had some colours left. Indeed, the observant visitor to the Assyrian galleries at the British Museum will be rewarded, for there are just a few traces left which tie these apparently monochrome stone slabs into a colour scheme which the English archaeologist Austen Henry Layard colourfully visualised when he had his reconstruction of Assurnasirpal's throne room published in 1849. Later Assyrologists would agree that the details of this reconstruction are wrong, but that the scene as a whole carries conviction.

Traces can be seen on reliefs that come from two different periods and locations. Red and black are still to be seen on the footwear worn by the figures depicted on seven carved panels from Nimrud in about 865 BC. These are also the colours of other details, such as a bow or an arrow, on different reliefs. Black beards, the whites of eyes and yellow jewellery are also visible. Other examples were carved over two hundred years later for the North Palace at Nineveh and show protective spirits. One of the genii, Ugullu or "Great Lion", still shows traces of red paint on the feathered mane of its lionhead.

Even so, it may take some vivid imagination to picture (as one museum guide encouraged her party to do) the red of the blood spewing out from a lion's mouth or oozing out of the wounds inflicted on attacked animals or men. The eye-witness accounts of excavators at Nimrud and Nineveh have convinced us that colour meant a great deal to the people in Ancient Mesopotamia, for they saw painted walls or objects in a much better preserved state.

Although we can still catch a glimpse here and there of a little red or some black, white, yellow or blue, and we also can take Assurnasirpal's liking for blue as trustworthy evidence, this begs a question: which other

colours elude our perception? The archaeologist Julian Reade also gives us an imaginative insight into the environment which the ancient Mesopotamians created for themselves:

> As the sculptures were closely related to paintings, they were naturally painted. The Ashurnasirpal sculptures, on the whole the best preserved we have, had at the time of excavation extensive traces of black paint on the hair, white on the whites of the eyes, red in various places; the palace of Sargon at Khorsabad included scenes in which the vegetation was found to be painted blue, possibly a decayed copper green. ... It is nonetheless puzzling that more traces of painting have not been recorded. Otherwise the palaces were colourful places, with wall-paintings on the plastered walls above the sculptured panelling. … Paintings in the main royal palaces of the ninth century seem to have had a rich blue ground, with details mainly in black, white, and red; later there was a wider range of colours. There were also panels of painted bricks, glazed, which decorated exterior walls, brightened the crenellations, or lined the arches above the major gateways. Colour at ground-level was provided by rich carpets, some of which were imitated in stone. We can hardly imagine the sculptures as dull virtually monochrome bands in deliberate tasteful contrast with their gaudy surroundings.[28]

Two observations need to be made for which we may have no plausible answer. Firstly, the colour yellow seems conspicuously absent. Secondly, the carvings are incredibly detailed and subtle. The Nimrud panels in particular reveal something of the richness of garments and objects, such as the sheaths of swords and the quivers which were finely decorated with miniature scenes. These were incised into the stone with the skill of an engraver. Why go to so much trouble when much of it may get covered up by paint – that is, if those scenes were ever meant to be painted?

Two possibilities spring to mind. On the one hand, the incisions may have been used like "tracings" for the benefit of the painter who needed to know which parts to pick out with his restricted range of colours. On the other hand, the bands above the hems of the robes, or the containers for weapons, could have been overlaid with very thin gold leaf. The burnishing of the gold would have helped to show up the incised linear design.

If gold leaf were once applied, that would account for the fact that the colour yellow is missing, for gold and yellow may have been interchanged as colour values. Also any sheath or quiver, as shown here in relief, was probably made of metal, perhaps gold or silver, into which images could be engraved for decoration. It is not very likely that such items were painted with garish colours. However, the application of gold leaf would

have required elaborate preparation of the ground onto which to lay the gold and there appears no evidence for this, at least not to the naked eye. If metal covering were involved, the possibility of its peeling off, rather than wearing off as with colour pigments, would effectively remove the applied surface and expose the bare stone. In such a case however archaeologists would surely have found traces of gold leaf in the debris or a tiny amount on the stone itself.

A similar problem presented itself to archaeologists examining the carved limestone reliefs at the Persian capitals of Pasargadae, founded by Cyrus the Great (559–530 BC), and Persepolis, which Darius began to construct around 520 BC. As in the case of the Nimrud panels, they found traces of various colours, notably at Persepolis. Red, blue, white, green and a blue–green mixture were noted. Yellow proper was missing on the reliefs, although a sherd found on the terrace contained some yellow ochre. Another sample of yellow appearance was analysed as being a colourless transparent substance showing up as yellow, some brownish-yellow which visually is registered as tan, or an orange colour which changed with time to yellow. A small piece of gold leaf was also discovered which was of the thickness of 2 micro millimetres and embedded in a large lump of material among the samples of Egyptian blue. Although no pieces of metal leaf had been found on the reliefs at the time of the investigation in 1983, the archaeologists working on the two sites suspected that gold leaf might have been used along with paints in the decoration of Persepolis.[29]

The late C.J. Gadd of the British Museum, who in 1934 published his volume on the Assyrian sculptures, thought that:

> there can be little doubt that colour was in fact used rather sparingly, and only to emphasize details … . So far as the [Nimrud] sculptures were concerned, the colours in use seem to have been restricted to black, white, blue and red, certainly in the ninth century, and probably until the seventh. The range of colours used in the wall paintings and enamelled bricks was more extended, as may be seen in the specimens collected in the Assyrian Room. For these yellow was introduced at least by the time of Tukulti-Enurta II, the predecessor of Assurnasirpal, and was freely employed by him; green does not seem to appear before the end of the eighth century.[30]

While the issue raised here about the presence or absence of certain colour substances remains inconclusive, we need to be aware of the fact that not only may colour application be influenced by the availability of colour substances at a given time and in a particular location, but that cultural and regional preferences probably played their part.

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As the evidence of colour in sculpture gradually emerges, often after painstaking sampling procedures and analyses in laboratories, we need to bear in mind that not every type of relief or monument was necessarily coloured. Because of their function and position *kudurrus* or boundary stones, stelae and obelisks probably remained unpainted. This may also be assumed of the numerous statues of Gudea, the ruler of Lagash (*c*. 2130 BC). Gudea had on one of his images proudly engraved "this statue is neither of metal nor lapis lazuli; no one has riveted it with copper, lead or iron: it is made of diorite". Indeed, the majority of the over thirty extant Gudea statues were carved in diorite, a rock which when incised and left unpolished has a golden appearance.[31]

The primary function of the *kudurrus* was the recording of major land grants, generally involving the king. The stelae and obelisks proclaimed the law of the land or let royal deeds be known. The Black Obelisk of Shalmaneser III (858–824 BC) was erected in a prominent position in the centre of Nimrud in 825 BC, shortly before the death of the Assyrian king. The obelisk glorifies the achievements of Shalmaneser and his chief minister, a shrewd political tactic during a time of civil strife in his country. The sheen of the densely grained, slightly polished surface of the dark stone helps to emphasise the crisp incisions of the cuneiform script and the detailed carvings of the figures. The matt and the polished surfaces help to differentiate images or writing and their background.

The Code of King Hammurabi (1792–1750 BC) is a conical stele of hard, black polished diorite 2.25 metres high which stands like an upright finger with the image of the ruler in prayer carved on the nail. The "code" dictated by the king was inscribed into the stone in cuneiform characters in the Akkadian language below the image. This stele was discovered in 1901 at Susa in south-western Iran, whither it had been taken by the Elamites as royal booty from Babylon. Also, many *kuddurus* were taken by the Elamites when they overthrew the Kassite dynasty in 1157 BC. A *kudduru* from the reign of Nebuchadnezzar I (1125–1104 BC) found at Sippar shows carved symbols of different gods invoked for the protection of the legal arrangements.

One such symbol shows a rainbow arching over a horse's head. This rainbow may be the closest connection between polychromy and the stelae of ancient times. The allusion to the rainbow and its various connotations has its proper place in Babylonia and deserves our attention. On a stele taken to Susa the symbols were identified and given their literary meaning. Thus, we know that the crown of the god Ninurta was described as a rainbow. Apparently *manzat*, the Akkadian word for "rainbow", was also

the name of a goddess and of a star in the constellation Andromeda. It may be this star that is illustrated as a rainbow arching over a horse's head. Moreover, the Sumerian city of Uruk was given the literary name of "Rainbow".[32] We shall find the deep-rooted cult symbol to have a significant place in our discussion of colour, even in modern sculpture.

A.H. Layard, who directed the excavation of the massive stone sculptures of winged bulls, produced later a coloured reconstruction of a palatial interior with such sculptures in place. He made them appear partially painted. While today there are no traces of colour left, Layard remarked in his writings on the fact that some colour was still visible during the excavation but that it quickly disappeared once exposed to the atmosphere.[33] He noted some dark pigments in the eyes of the stony creatures.

While polychromy seems (to us) impractical or out of keeping with these huge stone figures, we nevertheless have to consider it probable in view of what was wanted at the time. Indeed, the glazed brick reliefs of lions and bulls on the gates of Babylon, and of *Mischwesen* (composite creatures) on the palace walls at Khorsabad, were imposing images not only because of their size and position, but also because of the colours involved.[34]

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The man-headed winged bulls, also known as Guardians of the Gates, appear to be freestanding. This is because of the added fifth leg which, when viewed either from the front or from the side, gives the impression of a figure in the round, in spite of being set into the wall. The dimensions of the gates themselves were in keeping with the size of their stony guardians. Although the wooden constructions of the gates or doors have not survived, the bronze fittings of doors for a royal building at Balawat (about 845 BC) have been found which provided the measurements for a modern reconstruction displayed in the British Museum. The pair of door leaves each had a vertical post which rested in a bronze socket and at the top was held by a band and cap of metal. Equally spaced along either post were the loop endings of eight horizontal strips of embossed bronze, and attached to these were the wooden uprights which made up the actual leaves of the doors.

As with the bas-reliefs in stone, the bronze strips were decorated with design in relief. This introduces us to yet another aspect of ancient craftsmanship: metalwork. Already as early as the fourth millennium BC, casting – notably lost-wax casting – was the most important technique employed in small-scale as well as large-scale statuary. Even when bronze

alloys of tin and copper were known, the castings of statuary were still in copper, a difficult option as not even lead was added as a flux. Still, a particularly fine piece of copper casting has come down from the Akkadian period (about 2350–2200 BC) of a life-size royal head from Nineveh, perhaps that of King Sargon of Agade (Baghdad Museum).[35]

When Herodotus wrote *The Histories* in the fifth century BC he referred to "the Assyrians [who] went to war with helmets upon their heads made of brass and plaited in a strange fashion which is not easy to describe". Head gear of the kind that fits his description was already in fashion around 2600 BC, such as a gold helmet now in the Iraq Museum in Baghdad, a show-piece of great craftsmanship which came from the Royal Cemetery of Ur. Like the strips of bronze from Balawat, it had been worked in repoussé, a technique which produces a (low) relief by punching into a thin sheet of metal from the back and, as a rule, over a core of bitumen. When finished – that is, after the surface of the design has been chased or engraved and finally polished – copper or bronze objects will have a yellowish to reddish colour, depending on the copper content of the alloy. Bronze finds from antiquity will have changed their colour; the bright tawny colour will have darkened to anything between a green and a brownish-black shade.

Clearly, metals have colours which can be, and have been, adroitly exploited at all periods by metalworkers. White silver, white to reddish-gold, yellow brass, black iron and red copper were effectively used in combination with one another or with altogether different materials. More will be said of this later. None of the base metals, including tin, lead, nickel, zinc and antimony, was locally available in either Babylonia or Assyria. The nearest, or perhaps most accessible, copper mine was probably at or near Ergani Maden on the upper Euphrates and was perhaps producing ore as early as 6000 BC. This area is part of a copper belt which stretches from Iran across Anatolia and Cyprus to Sinai.[36]

There have been finds of hammered copper objects at Cayanii (sixth millennium BC) and a small heap of ore and many pieces of copper slag at Narsun Tepe (*c*. 3500 BC), a hill near the copper belt on the upper Euphrates, all of which have been examined for the metal constituents of the ore. The crystalline type of ore also revealed the existence of blue azurite, green malachite, white quartz and barite and red brown antimony-ochre. Colour pigments may well have been traded together with the copper.

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One more material must be considered here: ivory, which has a unique and fascinating appeal because of its white colour and silken sheen. In ancient times not only were ivory objects desired because they appealed aesthetically, but they also epitomised wealth and luxury. At Nimrud there have been particularly rich ivory finds which offer a unique insight into the type and style of artefacts and the trade in ivory objects. During the first millennium many of the ivory objects came from Syria and Phoenicia by way of trade, and also as part of the tribute paid by the conquered Aramaean tribes. The Syrians were renowned for their ivory carvings and ivory inlaid furniture. It seems that Syrian craftsmen skilled in this valuable trade were part of the tribute, which meant that their skill and labour were put to good use for the benefit of the Assyrian kings. This would explain the quantity of ivories and style of workmanship not native to Assyria.

Although ivory carvings were often inlaid with gold and semi-precious stones or overlaid with gold which gave them additional colour, it seems that the ivory itself was generally left in its natural state. However, ivory does stain and change its original colour under certain circumstances, for instance when subjected to high temperatures. After a time lapse of some three thousand years it is extremely difficult to determine whether the discolorations – ranging between yellow, brown, black and grey-blue shades – were accidental or intended.[37] The Phoenician carving of a female head that comes from Nimrud and is now in the Iraq Museum in Baghdad shows heavy discoloration which seems to add its own charm to this piece of ivory carving.

Many of the Nimrud ivories show Egyptianising designs with sphinxes and hieroglyphic inscriptions. Phoenician craftsmen of the eighth century BC not only assimilated foreign design ideas themselves, but also had these spread abroad. It is the small-scale object that travels lightly and thus becomes the most likely influence by spreading images and stylistic concepts further afield. But also it is the traveller, such as Herodotus, who sees, remembers and tells of the wonders or foreign customs he has met on his journeys. More wondrous works have been made, lost and found again since his days. For us questions remain. What motivated these early craftsmen? What were their intentions? Why did they do things the way they did? Why, for instance, did they want colour in sculpture?

Notes

[1] *Christliche Apologeten. Aus einer syrischen Homilie über den Fall der Götzenbilder von Mar Jacob von Sarug*, übersetzt von P.S. Landersdorfer. ["Jedermann war bemüht, seine Götzenbilder nach Kräften auszustatten. Der eine vergoldete, der andere versilberte seinen Gott. Ein anderer überzog sein Götzenbild mit Erz, weil er arm war. Wieder ein anderer, der noch ärmer war, schnitzte sich eines aus Holz und bemalte es, damit es gefalle. Ein dritter, der nicht einmal in der Lage war, sich ein hölzernes zu machen, kaufte sich einen Gott beim Töpfer je nach Vermögen." (transl. from German: HH)]

[2] R.J. Forbes, *Studies in Ancient Technology* (1964), Vol. I, on the applications of bitumen.

[3] Ibid., p. 86; bitumen was also applied as a paint.

[4] *MINERVA* (Dec. 1990), Vol. 1, No. 10, p. 8, "Museum Exhibition".

[5] In Genesis 4:15 we read of Cain being marked for his protection after he had killed his brother Abel.

[6] *SUMER 2* (1946), pp. 1–9, p. 71, Seton Lloyd, "Some recent additions to the Iraq Museum".

[7] Ibid., p. 8.

[8] A pair of goat figures were found; one was given to the British Museum, the other object is in the University of Pennsylvania Museum in Philadelphia, USA. The second figure is 51 cm high.

[9] Ibid., p. 8.

[10] C.L. Woolley *et al.*, *Ur Excavations, Vol. II: The Royal Cemetery*, (1934).

[11] Anton Moortgat, *Die Kunst des Alten Mesopotamien,* Vol. 1: *Sumer und Akkad* (1982), p. 85.

[12] Georgina Herrmann, "Lapis lazuli: The early phases of its trade", *Iraq*, 30 (Spring 1968).

[13] See George Roux (1964), *Ancient Iraq*, p. 229.

[14] *The Ancient Near East. A New Anthology of Extant Pictures.* Vol. 2. Edited by James B. Pritchard (1975), pp. 100–101. This slab was found in 1951. (Pritchard has sandstone, not limestone.)

[15] "Inanna's descent to the Nether World", in *Journal of Cuniform Studies*, *5* (1951), continued and revised by Samuel Noah Kramer.

[16] Lapis lazuli, carnelian and gold possessed important ritual values, but how the rituals and the symbolism were manifested is not entirely clear.

[17] See Julian Reade, *Assyrian Sculpture* (1983/92).

[18] It has been suggested that they were temple personnel. (Dr D. Collon's personal communication.)

[19] Written communication: Dr Dominique Collon, who pointed out that some yellow traces are still visible, although there is no evidence for the keying in of gold leaf or the forced removal of it. But see also J.A. Lerner (note 20), who refers to the problem of the missing yellow and the possible evidence of traces of it in Persepolis. Astrid Nunn, on the other hand, alerts us to the fact that colours were most probably used differently depending on locality and time, as Gadd already

indicated (A. Nunn, pp. 230–231: "Die Perser und die Mesopotamier gebrauchen die Farben anders").
[20] J.A. Lerner, "A painted relief from Persepolis", in *Archaeology* (1973), pp. 116–122. He refers to Egyptian blue, a synthetic pigment. (The Persian King Darius visited Egypt in 520 BC.)
[21] W.F. Leemans (1952), p. 17, mentions that offerings were made to her in form of statuettes of clay or sometimes of precious metals.
[22] This ties in with the myth of the Descent of Ishtar, narrated in *Myths from Mesopotamia*, transl. Stephanie Dalley (1989). See also A. Leo Oppenheim, "The Golden Garments of the Gods" in *JNES*, Vol. 7, Jan.–Oct. 1948.
[23] W. F. Leemans (1952) "Ishtar of Lagaba and her dress." In *Studia ad tabulas cuneiformas collectas ab de liagre Böhl pertinentia, SLB I (1)*
[24] The *mushhushhu* (raging dragon or furious snakes) on the gate of Nebuchadnezzar's Ishtar temple at Babylon was crafted from 77 glazed bricks (yellow, black, white and green in colour, each measuring on average 32 x 25 cm. See *MINERVA*, Vol. 8, No. 1.
[25] See Robert Koldewey, *Das wieder erstehende Babylon* (1990), fifth edition, p. 115. See also below, Chapter 7, p. 178.
[26] C.J. Gadd, *The Assyrian Sculptures*, (1934), p. 28.
[27] Georges Roux, *Ancient Iraq* (1964) p. 229.
[28] Julian Reade, *Assyrian Sculpture* (BMP, 1983/92), p. 20.
[29] "Identification of ancient Persian pigment from Persepolis and Pasargadae", L. Stodulski, E. Farrell and R. Newman, in *Studies in Conservation*, 29 (1984), pp. 143–154. The article includes four tables showing the results of the analyses of pigments found at Persepolis and at Pasargadae. The blue colour from Persepolis is Egyptian blue; a sample which proved to be azurite was also found. The majority of colour samples were taken from Persepolis, while from Pasargadae only a red pigment (hematite and hematite with a trace of cinnabar) was analysed. The authors stated (p. 148) that "Egyptian blue was manufactured as early as the IV Dynasty (c. 2600 BC) in Egypt, and was later widely used throughout the Near East and in Greece and Rome and by about AD 250 had spread as far as Norway."
[30] C.J. Gadd , *The Assyrian Sculptures* (1934), p. 28.
[31] The Gudea statues are singular among earlier sculpture in their avoidance of applied colouring. See Marie-Henriette Gates, "Artisans and art in Old Babylonian Mari", in *Investigating Artistic Environments in the Ancient Near East*, ed. Ann C. Gunter (1990).
[32] See entry "Rainbow" in Jeremy Black and Anthony Green (1992), *Gods, Demons and Symbols of Ancient Mesopotamia. An illustrated dictionary*.
[33] A. H. Layard, *Nineveh and its Remains* (1970), p. 134: Layard mentioned that on a gigantic head discovered at Nimrud black paint had originally been applied; and in the same location he observed that on the flooring, below the sculptures, considerable remains of painted plaster still adhered to the sun-dried bricks, which had fallen in masses from the upper part of the wall. The colours, particularly the blues and reds, were as brilliant and vivid when the earth was removed from them, as they could have been when first used. On exposure to the air they faded rapidly.

[34] See Layard's drawings in the British Museum.

[35] King Sennarcherib's records of the restoration of the palace at Nineveh (700 BC) mentioned the brightness of metal and stone: "Mighty cedar beams covered with sheathing of bright bronze and set them up in their doors. Out of white limestone, which is found in the country of the city of Baladai, I had mighty colossos fashioned and stationed right and left of their entrances." (See Luckenbill, *Ancient Records of Assyria and Babylon*, Vol. II, p. 180).

[36] Ulrich Zwicker, "Investigations on the extractive metallurgy of Cu/Sb/As ore and excavated smelting from Norsun-Tepe (Kepan) on the Upper Euphrates (3500–2899 BC)" in *B.M. Occasional Paper* No. 17 (1980), *Aspects of Early Metallurgy,* ed. W.A. Oddy.

[37] N.S. Baer *et al*.: "The effect of high temperature on ivory", in *Studies in Conservation*, 16 (1971), pp.1–8.

CHAPTER TWO

ANCIENT EGYPT: THE MAGNITUDE OF THINGS

> But concerning Egypt I will now speak at length, because nowhere are there so many marvellous things, nor in the whole world beside are there to be seen so many works of unspeakable greatness.[1]

"In Ancient Egypt no sculpture was left unpainted unless the work was incomplete."[2] This bold statement presents the gist of the matter we are about to unravel in this chapter. There is substantial evidence that colour in sculpture was of cultic and symbolic significance. There are indeed still a large number of polychrome sculptures extant that allow us to enter more fully into the question of the meaning of colour and its relevance to this ancient culture. However, not all the answers will be verifiable by traces of paint. Much that is known about colour and its application in Egyptian art is also known from written sources and modern scientific investigations. Thus, what the eye cannot always see, we may yet be willing to believe since it was the ancient Egyptians themselves who recorded formulae and rituals, and wrote many accounts on which we now base our own insight into this aspect of their culture.

Together with religion, the visual arts are at the hub of Egypt's ancient culture. Colour permeates everything that was given shape. The Egyptians perceived colour as an expressive and life-enhancing force vital not only to the well-being of those still alive but also to the dead, who it was hoped would enter another life. It is the latter aspect, the cult of the dead, to which we owe much of what we know about colour and sculpture, for what has been preserved for several millennia has come from burial sites and temples. The main types of sculpture are representations in the round of royal families, court officials and deities, and cut in relief are narrations which decorate the exterior and often also the interior walls of cult places.

Although the history of sculpture predates the history of dynastic Egypt, our first examples of painted statues are taken from a period when several fundamental concepts appertaining to religion, state and kingship had begun to take shape and were being given visual and literary

expression. The two coloured images of Rahotep and his wife Nofret (*c*. 2630 BC) are exceptionally well preserved. Their artistic merit and documentary value are unique. We shall therefore use these two seated statues from the Fourth Dynasty as our bench-mark when discussing sculpture of the Archaic period (Dynasties I–II) and the successive dynasties of the Old Kingdom (Dynasties III–VIII).

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Neither god nor king, goddess nor queen, yet both of noble birth, the couple's commanding presence bids our attention.[3] They are each seated on a separate throne, a white-washed cube with a high back. Their feet rest on a raised platform; the black paint thereon is still visible. The posture of both figures is formal as if during a ceremony. Nofret's white garment covers most of her body, leaving bare only her feet, one hand and parts of her shoulders and breasts. A multi-coloured wide collar fits close to her neck. Her face is framed by a black heavy wig of not quite shoulder length which is crowned with a floral band. Her eyebrows and eyelashes are also black. She gazes straight ahead. So does Rahotep, with his bright clear eyes cut from crystal rock, inlaid and surrounded by eyelids made of metal. His black hair is kept short, he has a blue moustache but no beard, and his features are clear cut. A white ribbon or chain with a blue pendant and a white apron are all he wears. His skin is of a reddish-brown colour, in contrast to his wife's complexion which is pale; both shades comply with the colour code established during the Fourth Dynasty. The spaces between Rahotep's arms and body and between his legs have been painted and are white, as is his seat. His upright support shows writings in black hieroglyphs. The statues were carved out of limestone, a soft to medium hard, cream-coloured material. They were found inside the mastaba, or bench, Rahotep's burial place in the vicinity of the pyramid at Meydum built by Sneferu, the first pharaoh of the Fourth Dynasty.

Towards the end of that dynasty another husband and wife had themselves represented as a couple in a style which became subsequently the usual image for private tomb statuary. Immortalised in greenish slate, the standing statue of Menkaure (Mycerinus) and Khamerernebty was, in its nearly finished state, placed in the Valley temple at Giza. Parts of the finely grained stone were already polished, yet the inscription of royal names, normally to be seen on every royal statue, is missing. Traces of paint suggest that the sculpture was once polychromed. The eyes appear blank; no details were cut into the orbs as these were most likely painted in. As with the statue of Rahotep, the arms are close to the body, and they

are still connected to it by the material which was left standing. The same applies to the space between the two figures – which, with statues carved of one block, was standard practice. A more open method of carving was adopted for wood as the arms were often separately shaped and attached.

To the modern viewer the monochrome appearance of the double-statue of King Menkaure and Queen Khamerernebty II from Giza seems complete without the paint. The soft sheen of the polished schist and the difference in textures of the smooth and unpolished surface help to modulate the forms, perhaps more subtly than the flat opaque colours on the statues of Rahotep and his wife, even though their contrasting colours harmonise and the total effect appears natural although different from the real world. Here the underlying principle lies in what we are willing to accept rather than to hope and expect.

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The question of how the ancient Egyptians saw and comprehended the world they lived in may only be answered by what they themselves have revealed. Two kinds of source material come to our aid: firstly, the visual arts, sculpture as well as painting; and, secondly, many textual references, but primarily those alluding to the appearance and function of cult statues.

The many representations of sculpture in scenes painted on the walls in burial chambers or chapels confirm observations made from actual statuary. In the burial chamber of Ti, a high-ranking official of the Fifth Dynasty, a sculptor's workshop shows in some detail the production and method of finishing statues. The two activities of polishing and polychroming a figure have been recorded in other mastabas during the same and subsequent periods. Workers are shown rubbing and polishing the surfaces of a carved figure; elsewhere a painter is holding his palette while applying the colour to a statue with his brush. In other scenes the completed cult object is being transported to the tomb or temple where the appropriate ceremonies take place, also shown in many scenes.

All polychromed statues had to comply with the rules established for painting and sculpture. The difference between a painted figure of a living person and one which was made to look life-like may perhaps not be immediately apparent when looking at these paintings. It is essential to take note of the context and read the entire scene – or scenes – and discover the interrelationship between active and passive figures, between sculptors and statues, between one event and the next, moving from a workshop setting to a scene showing the finished statue which is being transported by barge. One scene flows into the next, as in life, until the last

episode fully reveals the Egyptian's preoccupation with the dead. Bridging the abyss between this and the next world is the image, the counterfeit of man, which "He who keeps alive"[4] produced. The sculptor, thus referred to in ancient days, not only gave permanence to the memory of a person; he in fact created the conditions for the dead to repossess his earthly forms.

The idea of "keeping alive" the persona of a deceased person may at first seem foreign, particularly when considering the various strange rituals of washing, dressing and feeding of statues that were involved.[5] However, the initial concept may simply have been to produce an image which kept the memory alive.[6] Within a religious and ceremonial context the cult image received, by proxy, the care and attention normally bestowed on a living person. The staged ritual, or daily divine service,[7] takes commemorative art to its proper conclusion: the cult statue's function is to bring the memory of the dead into the presence of those attending to it. As the object of focus, it is made to receive the ritual offering. Egyptologist Siegfried Morenz made the following point.

> [the daily service for the image] throws light on the origin of our word "cult"; the image of the god is "cultivated" (*colere*), i.e. cared for. Each morning the priest opens the shrine containing the image, prostrates himself before it, cleanses and perfumes it with incense, anoints it and beautifies it with cosmetics, adorns and embellishes it and places a crown upon it. Finally he wipes away his footprints. Each motion is carried out with due ceremony.[8]

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Gods and their divine representatives, the kings, were the subjects of the earliest cult images. By the Third and Fourth Dynasties several important religious concepts had been established. For instance, the king was thought of and presented as of direct descent from a god, a concept which had developed from the idea of the monarch being a king-god and bearer of a divine office who was created in the image of a god. Deities, on the other hand, appeared in various guises as personifications of cosmic powers. Some took human form, such as Ptah, Isis and Re; others were likened to creatures of land, air or water. Horus, the sky-god, was identified with the falcon. The god of the necropolis, Anubis, was always shown as a jackal-headed human. Whether a national or local, a major or minor god or goddess, each represented a power which was given identity through its human, animal or hybrid form, or through its attribute and colour. While Re was shown to be of golden colour, Osiris was sometimes shown to be green, then black, depending on which aspect of his deity was

being portrayed. Ptah was black or green or golden. The three aspectival colours were, however, not shown together in either god.[9] At the apex of this hierarchical ordering of colour that symbolises the divine character, or aspect, was gold that shines as bright as the sun. Black was of the nether world; green was associated with renewal.

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The Cairo statue of the Third Dynasty King Djoser (2687–2668 BC), whose name means "He who opened the stone", still shows traces of yellow ochre, rather than reddish-brown as with Rahotep, where his body is not covered by his tight white cloak. His striped head dress (*nomer*) and black beard formalised his appearance as king-god. His inlaid eyes, which would have been vividly expressive, have been gouged out. His foot-rest bears his name. Found in a sacred place at Saqqara (near Cairo), this limestone statue of a stern-looking ruler belonged to the time when the king was revered as god. Future kings withdrew from such an exalted position and emphasised the human aspect of their divine descent. The doctrine of the king's two bodies makes this clear. When in later times he was called "son of Re", he could give full expression to his personhood, while at the same time he was able to be the god's representative through the office of divine kingship. Because of the perceived need to safeguard beyond death the identity of his personhood (*ka*), statues were made and set up in tombs. This applied not only to the king but also to individuals of some standing, which led under Cheops to an increase in private cult images and an expansion of cult practices. These inevitably deflected from the worship due to the king and the gods. Two reigns later, however, another pharaoh of the Fourth Dynasty, Chephren, had this trend checked by disallowing such widespread practices. The two statues of Rahotep and Mycerinus span this short but puzzling period in the history of sculpture when no more private statues were set up in any of the mastabas at Giza. Yet many of these tombs enclosed, like the pearl in an oyster, an uncoloured "reserve head". We shall come back to this strange assortment of over thirty white heads that have been found in tombs.

Leaving also aside for the moment any further textual references to colour as applicable to cult images, what have we observed so far? We noted that the colour scheme on statuary diverges in several respects from their natural model, the living person. The colours given to the skin or beard, and also to the interstices of a figure and its support, tend to differ from the expected colour values. They do not correspond with the natural or true colours of these objects; they deviate from the perceivable by shifting our attention to a conceivable world, equally true within the

accepted canon. Denoting rather than referring, the chosen colour values ascribe to symbolism and the imagination, which belong to the realm of make-believe.

While much in art is an imitation of some quality or characteristic, we nevertheless must distinguish between assimilating and mimicking. The statue of Rahotep has been created in imitation of a particular person whose own features have been assimilated to make up a likeness of him. However, if we take his eyes, they – compared with the rest of the body – mimic life-like qualities. They catch the light, they sparkle, they have depth, and their glossy appearance suggests the moisture of real eyes. Indeed, they could be confused with living eyes. Set into the head of a statue, such eyes retain what is quintessentially characteristic of a living person without necessarily being exact copies of that individual.

Sometimes, when imitating a quality that seems uncharacteristic, the purpose was to enhance the material or the object. There are numerous instances when a limestone block was painted in imitation of granite or basalt. By colouring the softer, inferior stone in order to mimic the appearance of a harder, more durable material, the notion of durability and therefore permanency was imposed on it. To the ancient Egyptian the concept of things being imperishable was part of the world view.

However, while colour may be used to confer to the material substance a superior quality which in fact it does not have, colour may also be applied in order to cancel out the true state of the material. The stone figures had often been carved more guardedly when compared with wood carvings. The statues, when finished, still cling to the cuboid dimensions and planes of the block; the openings between the body and its members have rarely been realised. The material was left standing to serve as a prop while visually it had to be ignored. By painting the in-between areas black, the problem disappeared into the hole which never was; or the pillar or back-rest of the statue, now white-washed, merged with its surround, or at least appeared to be less solid and obtrusive. Illusion, rather than imitation, helped to overcome an essentially technical problem, although not entirely so since the sculptor still shrank from releasing the statue from its block. Wood carvings were treated quite differently. The fibrous material had more resilience when cut into under the blow of a mallet. Also, the arms were as a rule worked separately and joined onto the body by mortising or dowelling. Full advantage was taken to open up spaces and to express physical movement None of the joints was visible once the figure was completed, for it was gesso coated and then painted.

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A cult statue offers two distinct areas that can be adopted for the use of colour symbolism: firstly, the body (and more specifically, the skin and hair, sometimes also the eyes); and, secondly, the dress and any accessories, such as the crown. The anthropomorphic deities tend to be of one colour only – that is, the one assigned to their deistic status. Representations of mortals are distinguished by the colour of their skin: reddish-brown for male, light yellow for female; foreigners are recognisable by their darker complexion. This is the colour code to which Egyptian art adhered from the Fourth Dynasty. The colour of beards, crowns, cloaks and collars or amulets is also usually invested with symbolic meaning.

As regards the cult statue, this scheme seems to have been faithfully followed, although private statuary was less tied by the strictures of the colour code. However, was it really always as clear cut as it appears? For instance, when coloured stones were used for the statues of kings, by whose skin colour were they known: man's or god's? The greenish cast of the schist of which the statue of Menkaure (Mycerinus) and his wife was carved may be interpreted as denoting renewal as we link the image with green Osiris.[10] If painted over with reddish-brown and yellow, the respective colours for male and female, this would clearly emphasise the human aspect of the king and his queen. We have already observed that this particular statue shows some traces of colour, but not enough for us to decide upon the original intention. The long dynastic progression also raises the question of whether the Egyptians were able to sustain their received tradition in all its aspects at all times.

In general (and this is what the ordinary viewer's impression would be), the distinct style and quality of Egyptian sculpture appears to be unchanging across its long span of history. However, there were times when a less stable monarchy points to a decline in the visual arts, as for instance during the two Intermittent periods (7th to 9th Dynasties and 13th to 16th Dynasties) and again during the last phase of the long pharaonic reign (27th to 31st Dynasties). Then, particularly during the Twelfth and the Seventeenth Dynasties, the canon or artistic guidelines that led to a revival in the arts had been re-established. Another pronounced artistic resurgence came during the kingship of Akhenaton (1352–1336 BC; 18th Dynasty) when the new style that was introduced broke with the more severe canonical style.

With the opening of several major tombs that were still intact and revealed their original contents, archaeologists and scholars were able to sample the cultural remains of specific periods and to begin to compare and here and there observe deviations from the assumed pattern.

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One puzzling feature is the beard worn by the pharaoh, although not by all, or under all circumstances. Djoser's beard and hair were still black but, with blue pigments having become available by the end of the Fourth Dynasty, this was the colour often given to the beard.[11] The side straps of the royal beard, by which it was attached to the crown, suggest that the beard was of emblematic significance, and so may its colour have been. Indeed, like crown and apron, the beard may be seen as an attribute of power received from the gods who, if in human guise, were also shown with a similar type of beard. In 1989 a câche of sculptures was discovered at the temple of Luxor. Among them was a kneeling King Haremhab (18th Dynasty) in front of the god Atum. At the point of retrieval from the hole filled with ground water, the face and beard of Atum (one of the gods shown in human form) were still covered with a layer of blue paint.[12]

When the archaeologist W.M. Flinders Petrie reopened Rahotep's mastaba at Meydum, he found that previous excavators had been less circumspect then the job demanded. The wall decoration had suffered damage – in particular the colours of the murals which, except for small patches, had disappeared. Petrie was however able to make careful copies, indicating the colour traces still visible. These show that Rahotep wore the same steely blue moustache and pendant as on his statue. He also was depicted in the offering scene as a Sem priest wearing a leopard skin and receiving the gifts that had been piled upon the offering table in front of him.

The setting of private statues was the richly decorated cult chamber within the mastaba where the perfunctory offerings took place. The stone walls were as a rule carved in relief and then painted. The many scenes, often arranged in registers, illustrated events taken from the life of the tomb owner. These would include accounts of his estates, the livestock kept there and the servants and workmen engaged in various tasks. Other scenes depicted his domestic and family life, leading up to the most important scene, showing him seated at the offering table which had been laden with all kinds of produce from his estate. The inscriptions were in hieroglyphs; these were frequently carved and painted in diverse colours, adding to the rich pattern on the walls. The lintel of the entrance, as for instance in Rahotep's mastaba, gave the various titles and the functions held by the owner during his life-time. Rahotep was described as "a king's son of his body", and as "high priest of the sun at Heliopolis".

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Due to the economic decline and political instability towards the end of the Old Kingdom, the cult chamber of the mastaba was left undecorated. Instead models of domestic and workshop scenes were added to the grave-offerings. Carved of wood and painted, these toy-like miniature scenes convey an idea of daily life in Ancient Egypt. Also found in graves were models of offering-bearers carrying farm produce aloft on their heads. Representations of scribes and models of servant figures had been added to the grave to ensure the continuation of domestic comfort for the departed. Carved in wood, the female servants were usually shown wearing tight-fitting and colourful dresses on their slender bodies.

The attractive pattern of these dresses shows balance and rhythm, as do all other ornaments invented by the Egyptians. On what formulae were these designs that gave them their pleasing appearance based? Shape and colour are the two elements of every pattern. By repeating the motif, the basic design, a pattern evolves. This is also the underlying law observable in nature to which the early designers resorted. The repeat pattern and variants of scales, pedal or feather designs appear again and again in Egyptian art. The pattern painted on servant models from the grave of Tutankhamon (1347–1338 BC) of the Eighteenth Dynasty shows additional variations based on such simple formulae as the pattern of knotted nets, nets of cylinder beads and tapestry weave. While shapes provide areas and boundaries for the colours, it is the sequential arrangement of a set of colours that gives these patterns their rhythmic flow.

The Egyptologist H.G. Evers[13] observed that the preferred colour sequence in ancient Egyptian ornament followed a two- or four-colour scheme. This seemed to have been the case particularly for jewellery of the Old Kingdom and Middle Kingdom, for which either a blue–green or a blue–red–green–yellow sequence was favoured. During the reign of Sesostris II (1897–1878 BC) the blue–green colour scheme was again prominent. In the course of the Twelfth Dynasty the rhythmic colour pattern followed the blue–green–red–green–blue arrangement. For the collars worn during the Middle Kingdom (Dynasties XI–XIII) and New Kingdom (Dynasties XVIII–XX) the seven bands varied between blue–green–blue–red–blue–green–blue. Both colour sets were used during the earlier part of the Middle Kingdom. For the high collar worn by Nofret, who lived during the Old Kingdom, white also belonged to the basic colour scheme and was applied as a dividing colour for each band of the red–yellow–green spectrum.

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Over a thousand years separate the statue of Nofret and the bust of Nofretete, the Eighteenth Dynasty queen and wife of the heretical King Akhenaton. What both pieces of sculpture have in common is that their colours have been admirably preserved and that the princess and the queen are each shown wearing a multi-coloured necklace. This is as far as we should want to go in comparing the two works, for in art a thousand years are not but a day. During the fourteen intermittent dynasties successive sculptors were able to pass on a tradition which in spite of, or perhaps because of, its in-built constraints kept alive an art form capable of rendering an image of Nofretete which has captured the true meaning of her name: "beauty is come".

The bust was found at Tell el-Amarna in 1912 and is now in Berlin where, after its arrival, it was thoroughly examined and catalogued as a "sculptor's model". In an essay contemplating the head of Nofretete, the Egyptologist Rudolf Anthes[14] wrote "What strikes us most about the head, is that which is also its weakest point, the colouring." However, we have to ask ourselves: what was its purpose? If, as it is claimed, it was a model for a sculptor's studio, then our judgement will have to take this very fact into account. A model is an aid for reproducing one or many more likenesses of the same person. Thus the applied colours served, in the first instance, as a future reference. The sides of the bust were left unpainted and one eye appears blank while the other has an inlay of shell and rock crystal. Whether the two different finishes of the eyes were intentional it is difficult to say as the bust may well have simply lost its second inlay.

The portrait of Nofretete was cut from a fairly soft limestone and touched up with plaster where this was necessary; stucco or plaster also served as a foundation for the colouring. The face and neck are of a light tan, the mouth is red, the eyebrows and eyelids are black. A golden-yellow head-band covers any hair that might have protruded from under the crown. The queen wears the "blue crown", around which a ribbon of regular colour squares is painted in, probably in imitation of inlays. These colours match the elaborately fashioned collar. An uraeus head (a snake emblem) was once attached to the front of the crown.

Excavators of the same Tell el-Amarna expedition of 1912 found another head of Nofretete which came from a sculptor's workshop. Carved from a quartzite block, this unfinished piece of work lacks its crown, for which a square peg was left standing on the cranial floor. Yet the head itself appears complete, for all the finer details of the face had been modelled, the mouth painted red and the eyebrows and eyelids outlined in black. As the head ends in a rounded neckline just above the collar-bones there is no hint of a decorative collar. The surface of the face and neck had

not yet been prepared with a stucco coating. The pores of the tawny material are still visible.

The shade of the stone and the touches of colour on lips and brow underline the sensitive modelling of the face. The given colouring seems sufficient and a full colour treatment almost out of place. This tentative approach towards a more restrained colour scheme suggests that underneath all the conformity the artistic tension remained alive. Here the black and red colours test the possible transformation; the brush marks are applied straight onto the stone before a coat of white stucco makes this process of canonically correct completion irreversible. Yet, as if to keep his distance, the sculptor left the eyes unpainted; they gaze blindly into the void.

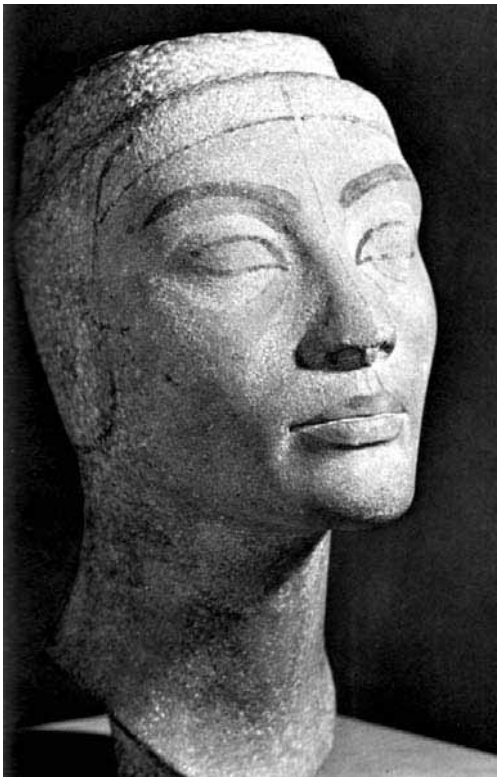

Fig. 2–1 Egyptian, head of Nofretete, wife of Akhenaton (Amenhotep IV), New Kingdom, Eighteenth Dynasty. Black and red for eyebrows and mouth complete the facial features. Cairo, Egypt. Inv. no. 18271, bpk / Margarete Büsing.

But let us return to Anthes's comments on the colouring of Nofretete's bust. Modern make-up may well have since conditioned our perception of the polychrome head of this Eighteenth Dynasty queen and find the colours less problematic, for has she not become an ideal of feminine beauty, copied and sold as a poster (a pin-up model) in our own time?

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Another queen of the same dynasty, who had come to the throne as co-regent under her father, Thutmosis I, reigned just over one hundred years earlier. Her name was Hatshepsut (1473–1458 BC). She began her reign with the titular designation "queen". One of her epithets was "Embraced by Amun, the first among the women". During her reign of just under twenty-two years, the queen not only held on to her illegitimate position as ruling monarch, but gradually transformed her public image of being queen to that of pharaoh. She was a prolific builder, and over the years she had numerous statues made of herself and at least one of her in disguise of the sphinx, hewn out of red granite and partially painted. After her reign many of these sculptures were wilfully damaged or destroyed. Of what has survived much was found in a quarry. The Belgian archaeologist Roland Tefnin reconstructed the development of her official image. He was able to show that she was engaged in a deliberate policy of presenting herself as pharaoh by gradually adapting her physical appearance to suit the role she had adopted.

At the outset of her reign she was represented looking rather earnest; her eyes were set obliquely, her mouth was small, she was unsmiling, and her nose was straight. She had the body of a young woman. Her skin was painted yellow. As she grew older her perception of her role as monarch began to change. During the co-regency with her father she was still very much the female monarch who shared the pharaoh's throne, but as the circumstances of her regency changed so did her attitude toward her position; she began to see herself as pharaoh. She now had herself portrayed with more rounded, wide-set eyes, with an aquiline nose and smiling, sure of her position. The straight royal beard, the crown with the uraeus head and a flattened chest completed her guise as pharaoh, not without also having had the colour of her skin adapted to suit her new image. Initially yellow, then a tawny orange, it finally turned masculine red.

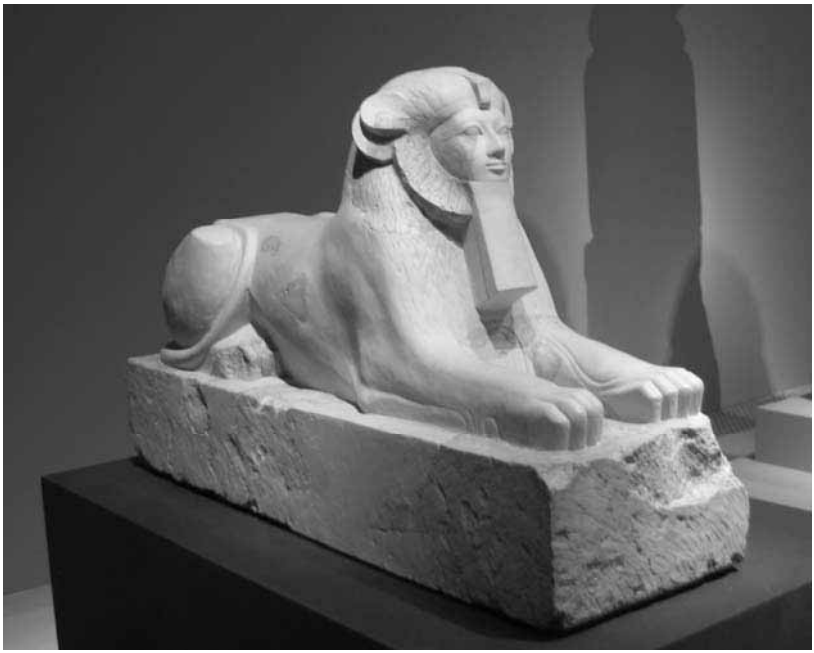

Fig. 2–2 Hatshepsut as a maned sphinx. New Kingdom, early Eighteenth Dynasty; joint reign of Hatshepsut and Thutmose III (1479–1458 BC). Senenmut Quarry, Deir el-Bahri, Thebes, Upper Egypt; MMA excavation. Limestone; h. 63.5 cm, l. 106.7 cm, w. 33 cm. © The Metropolitan Museum of Art, New York. Roger Fund, 1931. Acc. no. 31.3.94.

Fig. 2–3 Seated statue of Hatshepsut. New Kingdom, Eighteenth Dynasty; joint reign of Hatshepsut and Thutmose III (1479–1458 BC). Senenmut Quarry, Deir el-Bahri, Upper Egypt. Indurated limestone, paint; h. 195 cm, l. 49 cm, w. 114 cm. © The Metropolitan Museum of Art, New York. Roger Fund, 1929 (29.3.2).

Scholars have asked themselves why Hatshepsut went to such lengths, what motivated her. There are two views which, without necessarily contradicting one another, present different pictures. In her funerary temple at Deir el-Bahri she had her legendary birth represented. The text claims that oracles had predicted that one day she would become pharaoh. She was, it was said, simply harking back to the canonical form of kingship and revived the mythical concept of the god–son relationship of the pharaoh, accepting its full consequences. But why should she in the first instance have wanted to revive such an ancient concept when she as co-regent during the reigns of her father, husband and later her son-in-law had no legitimate claim to the throne? She played power politics; through the changing image of herself she endorsed her propaganda effort directed at consolidating her claim to the throne.

The fact remains, as Tefnin has shown, that within the rules of the canon she was able to make explicit her physical adaptation to the new role. William Kelly Simpson demonstrated this with another example, the statues of Osiris on the upper terrace of her funerary temple, which developed from a coloration in yellow (sanctuary), to orange (back wall of terrace), to red (portico of the façade):

> The large kneeling and standing statues of red granite have essentially male bodies, and are bearded. In all of these statues there is a propagandising element towards the assertion of the fictitious masculinity of the ruler. … Never before or since did Egyptian art serve the uses of dynastic and religious propaganda with such emphasis.[15]

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Six centuries have elapsed since the making of Rahotep's funerary statue and that of Mentuhotep II found at Deir el-Bahri (*c*. 2030 BC), and now in the Egyptian Museum, Cairo. Time seems to have stood still, for the polychromed carving of the Eleventh Dynasty followed the same principles and techniques of shaping and finishing; the block and the grid determined the structure and shape of either medium, sculpture or wall-painting. The colouring is bold, although even more so with the statue of Mentuhotep II whose ears, face, upwardly curved beard, and hands were painted a bluish-black which errs from the canonical reddish-brown for the male figure. He wears the red crown of Upper Egypt and the white cloak worn during the Sed festival – that is, the jubilee festival when the death of the ruler was thus symbolised. On the day after the burial the festival celebrated the start of a new rule. The image of the ruler is shown seated on a black block with its usual platform and back rest.

What had the painter or his patron in mind when choosing a dark colour for the ruler's complexion rather than the obligatory red tan? The king may have been dark skinned and thus wished to be represented in that colour. Or he was identifying himself with Osiris, as his crossed arms seem to suggest, a stance also observable on Osiris images. This would have been in keeping with the idea of the ruler's death central to the Sed festival. Another possibility, which need not exclude the other two, may have been the concept of durability and permanence, often expressed by choosing an appropriate material such as black basalt. The lack of such quality stone was sometimes overcome by simply painting an inferior material suggesting basalt. No doubt these options were carefully considered by Irtisen, the chief artist to Mentuhotep II. His own funerary stele,[16] which this self-professing artist had cut, is of the greatest interest here for he stated thereon what his qualifications as the king's chief sculptor were. He was probably trained at Memphis, where the ancient cults and rituals were still kept alive. The canon was laid down in the books of gods, which he may have studied since one of the epithets given to the artist was "Knower of spells in the gold-house" (or the house of life), a reference to the ritual of the Opening of the Mouth, when the sculptor would have been directly involved in the ritual by touching the mouth of the statue with red colour and painting the eyes with green.

The text on Irtisen's stele mentioned not only what he knew but also what he was able to pass on to his eldest son, who inherited the office of chief artist to the king. He enumerated the various kinds of practical knowledge relating to the canon of proportion, to the preparing of colours and to painting, since these were also essential to the completion of a piece of sculpture in the round or in relief. He stressed that he was able to apply colours which would not wash away. This is an allusion to a problem which artists from the Fourth Dynasty had encountered when trying to fill the relief-en-creux, or sunken relief, with colour pastes. After the fillings of paste had dried and shrunk in volume they tended to drop out. The later artist either referred to his ability to produce faience, which is more permanent and washable, or to the practice of adding a binding agent or an adhesive to the colour that held the pigments in place and protected the surface. Either way, the colour effect would have been preserved and its importance appreciated as certain cult statues underwent the ritual of "washing, dressing and feeding" which might have damaged the painted surface.

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We now come back to the thirty-three reserve heads. Most of them were found at Giza in mastabas of the Fourth Dynasty; none of them can yet be safely categorised according to its iconographic origin and purpose. They are a class of their own, for they all are alike in many respects. They are white limestone carvings of full-sized heads which were made to stand on their levelled-off necks. The hairline, or the tight cap they perhaps wear, emphasises the round shape of their skull. The strong modelling of the face and cranial structure gives each head its individual character, while at the same time there is a uniformity regarding their age and sex; they all have the same agreeable look. Although there are the odd traces of black or ochre colour, the collection of thirty-three heads may be perceived as monochrome. Without colours were also their surrounds within the mastabas where they had been found. They are known as reserve heads because they replaced the private statues of the owners of mastabas during the Fourth Dynasty, with Cheops, then Chephren, on the throne. When Menkaure (Mycerinus), the next pharaoh, permitted the reintroduction of statues into the private burial chambers, the use of reserve heads discontinued except for the few found in mastabas of the next two dynasties when, in fact, polychromed statues in private mastabas were again the norm.

We may recall that the cult image was a representation of the owner of the tomb. It bore his features and was given an identity, not least because it also had an inscription of his name. The reserve head was nameless, and it had no distinct personal traits by which to recognise the person to whom it related, nor was it given a setting which depicted him in painted scenes in the various roles played by him during his life-time. The head was sealed off within a niche down below a shaft and just in front of the chamber. Only a small aperture in the wall of the niche was provided for the person's *ka* (spiritual personality) to make contact with its identity.

What was the function of these reserve heads? Why have the conventional statues been reduced or replaced with such abstracted cult images? A number of theories have been put forward over the years by scholars; may it suffice here to take up two of the most plausible suggestions and test a third as a counter-argument. Jan Assmann postulated that the reserve head was added to the grave's contents in order to conserve the physiognomy and the identity of the owner for the return of his *ka* as otherwise no means of identifying the body of the deceased would assist its return. However, by sealing it in, the regular ritual practices could no longer be performed.

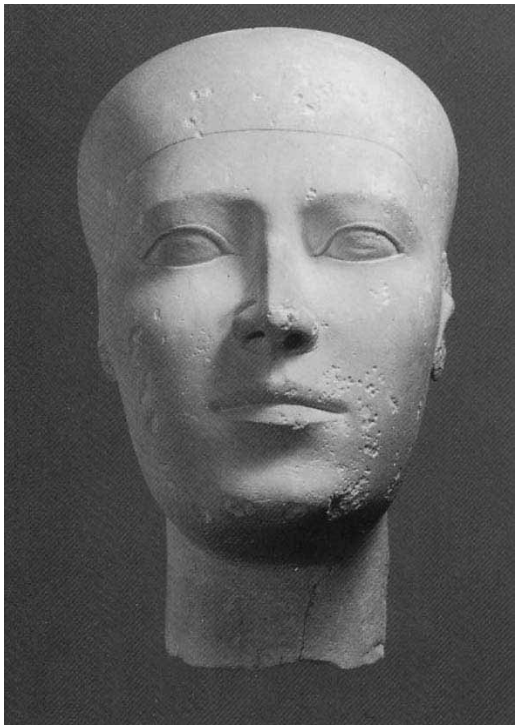

Fig. 2–4 Ancient Egyptian "reserve head" from a burial chamber at Giza; identity unknown. Old Kingdom, Fourth Dynasty. This head is a typical example of a reserve head; these were close shaven and usually carved in limestone.

Roland Tefnin agrees that the head replaced the usual statue, but he perceived its role to be eminently ritualistic.[17] He observed several features which he thought had magical connotations. Many of the reserve heads had sustained certain types of injury which cannot be explained as accidental. These were inflicted with a sharp implement, notably on the ears, across the top and back of the head and on the neck. Because of these traces of tool marks the injuries are thought to have been made deliberately and to the detriment of the object's appearance.

As none of the reserve heads was found where the statue used to stand, it may be assumed that they no longer served those rituals for which statues originally were required, namely to act as recipients of cult offerings, as we have noted above. While the statue was placed within a cult chamber or *serdeb* created for the purpose of performing rituals, the

reserve head was placed into a niche far below ground level and made inaccessible. If any magic rite had to be performed on it, then this must have taken place before the head was buried and sealed in, which is quite plausible. However, it seems odd that suddenly and for a limited period in time a cult object should have existed for the sole purpose of practising a rite with such negative overtones created by the various injuries to the persona represented.

The ears of many reserve heads were treated in a most puzzling manner; although on a few heads they appear to have been left intact, on others the ears never existed or they were chiselled off or partially damaged.[18] A few heads had them separately carved and dowelled into place. Then, across the centre and back of the cranium several heads had deep lines incised with a sharp tool. Another line was often made around the circumference of the neck, near to the base. The hairline, too, was sometimes marked with a cutting implement. In some instances the eyes were damaged. The nose, usually very vulnerable, rarely sustained an injury, or at least none as obvious as those on the ears and head.

We may speculate about the meaning of it all. The type of damage imposed on the heads is open to yet another interpretation in addition to those proposed by Assmann and Tefnin. Could the heads have been models produced in the sculptor's workshop as practice in carving for apprentices or for the making of masks from parchment? When applied wet, the parchment would cling to the form and mould itself during the process of drying. After that, the tight skin would have to be trimmed near the base line and released from the rigid model. An incision across the scalp would have helped to ease off the mask, provided there were no undercuts which prevented that. The ears would certainly have posed a problem as their cavities and undercuts would have made it very difficult to separate the mask from the mould. The kind of treatment observable on the ears would be in keeping with the problems faced by an inexperienced workman making moulds or by an apprentice who was set the task to carve a head and had his efforts corrected. Neither exercise would have made it necessary for the head to be polychromed. As for its burial, it may have been deemed appropriate to place the existing image near a mummy that was denied its own representation.

Roland Tefnin was struck by the irrealism of the colour, especially so when comparing the coloured bust of Ankh-haf (*c*. 2560 BC) with that of a colourless reserve head. Their remarkable typological similarity stresses the absence rather than the presence of colour, which was always regarded as an essential ingredient in the making of Egyptian cult images. He suggested that the magic ritual implied some form of punishment which

was inflicted during the ritual upon the hieroglyphic image of a person already deprived of name, and also of character, to which normally colour alluded. By removing from it yet another vital element, its ears or hearing capacity, it was made impervious to any future ritual incantations. Why this was thought necessary is implied in the communicative aspect of the religious cult between gods and human beings.

But what are we to make of the traces of red and black on one or two reserve heads?[19] These were apparently colours of the demon and their presence is therefore quite plausible within the context of magical rituals. As for the whiteness of the reserve heads – or *têtes magiques*, as Tefnin called them – he mentions one of the most ancient written records concerning funerary rites from the time of Cheops. This fragment, and also later Pyramid Texts, gives instructions concerning the ceremony of the Opening of the Mouth. The ritual is staged in the Golden House (the sculptor's workshop), from where the statue is taken to the tomb. The actors who partake are two craftsmen, a hewer of stone and a polisher, and the Sem priest who is reading the part of the (present) king-god. He instructs that an effigy should be made of "his father [the king] and in his likeness and to have the statue made into a living image". The ensuing scripted dialogue then excites mounting tension and hostility, symbolised in the action of "beating the image" and "making it shine" or "render it white". The priest, now in the role as Horus-Seth, admonishes the polisher with these words: "I am Horus-Seth! I do not permit you that you should whiten the head of my father!" This most puzzling scene seems to imply that the dead king is being judged and punished, a form of "character-slaying" since colour was supposed to give character to a person.

The ritual of the Opening of the Mouth itself is designed to impart life to the statue, to enable it to be fed with the food offerings which will henceforth be part of the regular cult service. The twinning of the gods Horus and Seth, the two former adversaries,[20] may explain the tension as they hold out power over the deceased, or his soul (*ka*). E.A. Wallis Budge refers to a passage in the Pyramid Texts (956a ff), wherein Osiris and Seth were implicated in a form of tribunal or posthumous trial of the dead (a kind of last judgement), and Budge comments on the act of "smiting" of the statue in his translation of the Opening of the Mouth, saying:

> it was one of the most important acts of this ceremony, which was intended to commemorate the murder of Osiris by Seth and his companions. Osiris was "smitten", that is to say, slain, and the smiting of the statue symbolised the smiting of the body of the god, and also the smiting of the mummy of the deceased whereby each was made a divine victim. Smiting a man, or an animal, or even an inanimate offering, was an act of consecration or

dedication and any being or thing which had been "smitten" became the property of the god.

For Tefnin the puzzle remains unresolved. However, one more line of thought deserves to be further explored. It concerns Ptah's relationship to the dead. The creator-god Ptah, who was also a god associated with the dead, was always represented in an anthropomorphic form wearing a garment similar to the wrapping of a mummy. In earlier times he was shown without a beard. His head was bare or, it has been suggested, he wore the close-fitting blue cap of the smiths, craftsmen and other workmen as sometimes depicted in the mastabas of the Old Kingdom. His own colour was golden, but it was sometimes black or green, emphasising the various aspects of the triad Ptah–Sakari–Osiris. Ptah figures carved of pink granite, the colour closest to human beings, suggest his link with mankind.

From the Middle Kingdom onwards Ptah is documented as taking part in the Opening of the Mouth ritual. He is also mentioned in the Shabaka text[21] as a god who dispenses good and evil. The Papyrus Berlin 3048[22] characterises him in the following manner: "He who has smitten in justice and brought to nought the liars." And on a stele of the Nineteenth Dynasty from Derel Medine a man called Neferabu laments, "I am a man who has sworn falsely by Ptah, the Lord of Maat and he has caused me to see darkness by day [i.e. being now blind]. Beware of Ptah, the Lord of Maat, he does not overlook any guilt in any man, etc." On other New Kingdom votive stelae, the god has been exhorted as "Ptah, the Ears which hear", and often on either side of the inscription many pairs of ears are shown. Whatever Ptah's function and associations, he had always been venerated by the craftsmen as the god who had created the world and had made everything therein with his own hands. Even the other gods he had shaped with his own fingers. The sculptor, however, he only imitated, for he could do no better.[23]

Like Ptah, Osiris had several functions which could be read off the colour given to his skin. We have already noted that black (or blue when interchanged for black) signalled his presence as the god of the netherworld. In paintings his face and hands were sometimes shown to be green, for he was also associated with renewal and vegetation.[24]

It is interesting that the colour green should denote both putrefaction and vegetation, decomposing and reviving, and also fertility. It is for the last reason, however, that Osiris was given the colour green. During the Eighteenth Dynasty "corn-mummies" were grown from bronze or wooden moulds, shaped in the image of Osiris.[25] This practice of "imaging" the coming back to life in the form of the worshipped deity may go back much further in time.

The symbolism of gold arose out of the cult of sun worship. Re or Amon, also referred to as Amon-Re, was the god whose skin was always shown to be of pure gold. When he was represented in paintings or polychromed reliefs yellow was substituted for gold. It is not difficult to see how the colour gold derived its symbolic meaning from the sun. Apart from its colour, the golden metal has another important aspect for which it was valued: incorruptibility. To the ancient Egyptian gold was pure and everlasting, which was of the greatest significance.

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The second king of the Nineteenth Dynasty, Sethos I (1290–1279 BC), issued a warning to caravaneers on the inviolability of gold: "As for the gold, it is the limbs of the gods; not your possession. Take care lest ye say [that which] resaid at his beginning of speech, My skin is of pure electrum."[26] Some decades earlier Tusratta, king of Mitanni, sent letters to the king of Egypt, Amenophis III (*c*. 1391–1353 BC) complaining about the gold statues that had never materialised despite a promise. He wrote: "and [with gold being the dirt] in [my] brother's country, [why] have [the statues] been a source of such distr[ess] to my brother that he has not [given them to me]?" In a previous letter to Amarna, then addressed to Teye, the queen mother, the Mitannian king claimed that her husband, the former king, had agreed to send statues of solid cast gold and genuine lapis lazuli, whereas she had received only wooden ones plated with gold. The Amarna letters do not reveal the types of image that were involved, but we get a glimpse of the trading value of gold and the prestige attached to it. The correspondent from Mitanni hinted that the Egyptian king could easily have afforded solid casts since in Egypt there was no shortage of gold. We do not know anything about the size of these figures. Obviously the larger they were, the greater the loss felt by the foreign king. The fact that he referred to gold-plated wooden figures suggests that these were not of trinket size but fairly substantial, and hence would have been far more valuable had they been cast. Because gold is a very malleable material it is easily hammered into sheaths and worked over a wooden core, or beaten into very thin gold leaf suitable for gilding. In the form of metal plates or wires it was often worked as inlays by hammering it into grooves or shallow beds, producing a decorative bi-chrome effect.

During the New Kingdom the mining of gold flourished, mainly in Upper Nubia from whence the Gold of Kush came, although two regions of Lower Egypt, Wawat and Coptos, were also known for their gold. Silver was much rarer and therefore of greater currency value. However,

the gold and silver alloy known as electrum was the metal mentioned by Sethos I. Lapis lazuli was obtainable only through trade from a remote area in Afghanistan. Malachite came probably from the Sinai region, where copper ore was found. The green-blue shade of this semi-precious stone was at times a substitute for the more costly lapis stone.

The complaint from Mitanni about the wooden statues having been only covered in gold invites some comments on the technical problem of making the most of gold. With solid casts it is the weight that matters because of their currency value; then and now, gold is valued by its weight. From an aesthetic point of view only the surface is of importance; hence the gilding of cult objects became a craft in its own right. In a study covering ancient Egyptian gilding methods, its two authors[27] wrote that the gilders' skill was ceremonially mentioned in a funerary papyrus of Neferronpet (*c*. 1400–1300 BC) as the "makers of thin gold". Another Eighteenth Dynasty source (Amenhotep IV), a relief from the tomb of Ptah in Giza, depicts the deceased in various activities in his role as "the chief of the makers of gold leaf". And in the tomb of Mereruka (*c*. 2400 BC) relief carvings illustrate the beating of gold in the workshop.

But we are reminded that:

> ritually or religiously, gold was associated with immortality, a concept of the utmost importance in the funerary practices of the ancient Egyptians. The entire process of mummification was devoted to maintaining the appearance of the body for eternity. The skin of the gods is described in many sources by a single word: Gold. And from the Middle Kingdom onward, Egyptian coffins and mummy masks had gilded faces and hands or, for those unable to afford the metal itself, the skin was painted yellow in imitation of gold.[28]

How thin can gold be worked? The modern gold leaf, which unlike foil or sheet is not self-supporting, may be beaten to a thinness of 1 micron, although in the majority of the thirty analysed samples from various periods of Ancient Egypt the measured thickness varied between less than 2 and 5 or more microns. Gold which contains a small amount of copper can be beaten to less than 1 micron. The ancient leaf composition is in effect an alloy of gold and silver, and frequently of copper also. The colouring of an alloy varies according to the amount of each component. This variation in colouring may be a desired effect when decorating objects. The wooden substrate, the carved image, may first be covered with a layer of gesso, then perhaps painted with a coloured bole, varying from yellow, through red to brown, before transferring the gold leaf. The authors of the study remarked:

> on many objects the gilding was not treated appreciably differently from other types of polychrome decoration and was frequently employed as one of many elements in a polychrome design. … Gold was generally used in addition to pigments and was itself painted, yet on some objects gold has a red cast or coloration. Red surface coloration was found as early as the Fourth Dynasty [*c*. 2630 BC].

Comparatively few metal sculptures have survived from earlier periods. Those full-sized figures we know of show however that they were not cast but hammered – for instance, the figure of King Phiops I (third king of the Sixth Dynasty, *c*. 2380 BC), which was made of copper sheath. When during later periods bronze casting, which was less problematic than copper casting, became more common we also note the diverse techniques employed when trying to give the metallic surface a colour contrast. Inlays of various metals or coloured glass pastes often picked out certain features or produced an attractive pattern. For example, the golden ringlets that created a pattern on a small crocodile bronze cast (Munich) gave the work its distinctive character.

The head of a king from the Ptolemaic period (third century BC) in the Roemer- and Pelizaeus Museum in Hildesheim is a fascinating piece of sculpture, largely owing to its rich colouring. This bronze cast, initially overlaid with gold leaf and with inlaid eyes, is now covered with a green patina of several shades and flecked with patches of gold and reddish "rust". By strange coincidence green is also associated with Osiris, the father of the dead and the embodiment of rejuvenation. What is new is its patina, a form of rust that lives on decay – patination grown out of corrosion, dying and living matter, the one feeding the other. But this was not the way it was intended. Statues were meant to be bright, untarnished manifestations of everlasting values, hence an increasing preference for polished metals or harder stones that often had distinct colours of their own. However, the Egyptians did not hesitate to paint the quality stone with yet another colour that more aptly represented the subject – for instance the statue of Amun, which had been coloured blue.[29]

Many materials were perceived as having enhancing properties. During the ritual of embalming the priest was made to recite "To you, NN, comes gold and silver, lapis lazuli and malachite. To you comes faience in order to make your face shine, and carneol in order to strengthen your stride." Or we read "You are walking on earth of silver and on ground of gold. You will be buried in a slope of malachite. You will live forever and will be always young."

From other texts we learn about the Egyptians' relationship with their gods and their thoughts on the duties which this involved. Sesostris III (*c*.

1878–1843 BC), who reigned during the Middle Kingdom, proudly announced how he fulfilled his priestly duties:

> I caused the lay priests to [know how] to do their duties, caused them to know the stipulation of everyday, the feasts of the beginnings of the seasons. I superintended the work of the sacred barque. I fashioned (its) chapel. I decked the body of the lord of Abydos with lazuli and malachite, electrum, and every costly stone, among the ornaments of the limbs of a god. I dressed the god in his regalia by virtue of my office as master of secret things, and of my duty as priest. I was pure-handed in decking the god, a priest of clean fingers.

Similarly, Ramses III (*r.* 1186–1155 BC), a New Kingdom pharaoh, proudly proclaimed what the total of the king's gifts to all the gods was:

> Gold, silver, real lapis lazuli, real malachite, all real costly stones, copper, garments of royal linen, mek-linen, fine southern linen, southern linen, garments of coloured linen, jars, fowl and everything which he gave to them, as gifts of the king. [L.P.H.] festal offerings, oblations, and "Books of the Nile-God", while he was king upon the earth …

All this was done in honour and memory of the dead. What was inscribed on the walls of monuments or statues was in hieroglyphics, or pictorial symbols.[30] They were, like all reliefs, either slightly raised or sunken, and then painted. At no period did the ancient Egyptians create high reliefs. Hieroglyphics, like all symbols, are really mnemonics. The application of colour probably further assisted the memory rather than adding to the meaning of the text. Hieroglyphic writings which show only two colour values for background and symbols may be read without loss of meaning, or perhaps the reader relied on his colour memory when seeing only the form of a symbol. Pictorial reliefs were painted and in this respect appreciated like any mural painting. The figures and objects in low relief, but also in paintings proper, always have cohesive forms which act as colour boundaries. The mixing of colour occurs by way of introducing pattern which, of course, also adheres to the same principle of bound colour areas. Thus, the colour values were always distinct and distinguishable.

What is known about their various sources of colour? The dry climate of Egypt has fortunately preserved much of the paintings on walls and statues, from which colour samples have been taken for analysis in laboratories. Whether organic or synthetic, pigments have to be prepared, which involves either a simple or a more complex process of production.

When the burial chambers of Prince Rahotep and Nofret at Meydum's North Cemetery were examined, much of the surface had entirely lost its

colour. This is unusual given the fact that the dry climate of Egypt preserved colour remarkably well elsewhere. However, the loss in these chambers was due to earlier malpractice when individuals inexperienced in archaeology and conservation had washed away the surface colour by making wet squeezes. Colour samples that were taken and examined showed that the white was pulverised gypsum, a form of calcium sulphate. The black is lamp-black; neither graphite nor charcoal has been noted. The yellow variants are all a form of yellow ochre with clay, selected for their different shades. These depend on how pure the ferric sesquioxide is; any admixture changes the hue. Flinders Petrie commented on the abundance of yellow marl at Meydum which, when steeped in sour wine, will give a superior pigment and is identical in colour with most of the yellows. The red sample was found to be red haematite ground in water. The coarser and darker reds come from natural deposits of ochreous clays, some of which contain fair amounts of manganese.[31]

Brown shades were obtained by using the technique of layering a thin wash of haematite red over impure black, although unburnt ochre was also found to have been used. The green pigment came from a pure malachite which produced a uniform tint. The archaeological report states that no traces of green or blue frit have been found in all this early work. Like brown, grey is a mixture, in this case of a pale yellowish earth with a little lamp-black, often appearing greenish. It was here used as a neutral background. The last colour, blue, was still rare. It appeared to Flinders Petrie as being of "a blue verditer tint which may have been derived from an impure earthy blue carbonate of copper". At that stage no sample was removed for testing.

But what about coloured frit? It is essential to Egyptian colour technology for, from this calcined mixture of sand and fluxes, basic to glass-making, the two synthetic colours blue and green are derived after a process of heating and fusing, then crushing and grinding into pigments. Blue frit, a brilliant blue colour, is also known as "Egyptian blue". It was applied during all epochs – that is, from the Fifth Dynasty to Roman times (2500 BC – 100 AD). A pale blue was also produced and was in use during the Old and Middle Kingdoms (2500–2000 BC). It is believed that this pale blue colour was applied instead of green when synthetic green was still missing from the palette. Green frit, however, was regularly used from the New Kingdom (1500 BC – 100 AD) onwards.[32] When scientists examined a vast amount of colour samples representing all periods, they found that "the glass components in all kinds of synthetic Cu-pigments and the Cu-glazes of Egyptian faiences are affected by devitrification, leaching out of alkalis, dissolution processes and secondary formation of

green basic Cu-chloride and malachite". The consequences of this are as follows:

> Precipitation of basic Cu-chloride can occur within the deteriorating pigment layer, along its surface and in the underlying substrate. In the course of this deterioration process Egyptian Blue and the pale blue Cu-glass pigment change to green, and green frit becomes paler in shade. As a result of deterioration and decrease in compactness the pigment layer crumbles. Since green basic Cu-chloride precipitated in the outer part of the stucco this material will be mistakenly believed to be a green primary pigment layer.[33]

The authors of the study came to the conclusion that the changes observed in green chromatic materials in the decorations of the epochs preceding the New Kingdom must also have consequences to the Egyptological colour symbolism, and recommended a thorough revision.[34]

The yellow pigments ochre and orpiment are natural products. These have been investigated by another team of materials scientists who were able to shed some light on the background of these two colours. The ochres were in use from the Old Kingdom until the Roman times, while orpiment was seemingly applied only in New Kingdom art. Orpiment in its purest form was used rarely; in most instances the yellow was a mixture of orpiment and yellow ochre. The reason may have been that orpiment had to be imported as Egypt had no mineral resources. Chronological investigations, carried out by the team, revealed Queen Hatshepsut as the potential importer of orpiment and first user in the New Kingdom. The source or origin of the mineral was most likely two mines near Lake Urmia in Asia Minor.[35]

The ancient epitaphs given to deities, kings, and even to their pyramids, may also shed some light on the rationale behind the Egyptian way of thinking about colour and its relationship to their religion and perception of life and death. When reference is made to Horus as "Horus with the golden embrace", that is quite clearly because of the golden colour of the sun embracing and giving forth life. The image of Horus had to be golden. The sky goddess Hathor, who was also known as "Hathor the colourful one", is another example by which to demonstrate how in ancient Egyptian times an idea evolved and was translated into an image that expressed, among other things, a colour concept. Hathor was sometimes depicted as the "divine cow" whose coat was enlivened by a pattern of fleurets which were inlaid in gold on bronze. The pattern suggests the patches of the variegated colourful coat of a breed of cows. More significantly, it relates to the idea of completeness, for in this context

"variegated" means all-inclusive, being of a generic type. Thus, it also came to express Hathor's character. "Colourful" or "variegated" is a colour descriptive and part of the colour code from the Fourth Dynasty onwards. The idea of "colourfulness" was therefore made visually explicit on small bronzes depicting the divine cow. Hathor, the Egyptian goddess of the sky, found a kindred spirit in Iris, a creation of Greek mythology, where she features as the goddess of the rainbow.

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For what reasons did the ancient Egyptians employ colour in sculpture? The reasons were as diverse as they were numerous and each one had its own set of requirements or may have involved some specific circumstances of its own.

To begin with classification, men, women, young people and foreigners were accorded their distinct colouring – red, yellow, light or dark – thus identifying each group of people. The gods were also given their particular shades according to their standing within the pantheon and its hierarchy. Within the pantheon, gold was the mark of supremacy. Some gods resembled humans but only in respect to form, not to colour; hence another criterion for assigning colour was symbolism as a marker. As a constant colour value, it referred to the divine status of a representation (e.g. the green of Osiris). And while the symbolic meaning of colour is embedded in the cultural and religious thinking of a people, there may be a perceived difference from one culture to another. We have noted that colour may be used manipulatively for propaganda purposes – in order to achieve an objective. Another reason for choosing certain colours is the need to denote the natural world. Characteristics, realism and truth all test the viewer's comprehension of familiar or hostile environments. Diverse shades and the consistency of applying the same shade to a type of object help to differentiate the sensory input and knowledge. This may begin with noting intrinsic colour values and then allowing the beholder to decide whether, how and why to override a given colour aspect. However, we have also noted instances of the "missing colour" (reserve heads) and registered these as negative statements. What is missing cannot just be dismissed – on the contrary, for it suggests that, one way or other, there is intentionality at play and there are sign-posts to a wider understanding of the cultural landscape we are wandering through.

One may speculate about the origin of polychromy. Two sources familiar to the anthropologist suggest that on the one hand body-paint was applied for ritualistic reasons, or tattoo marks may have been transferred to the shapes of votive figures or idols for more proprietary reasons. On the

other hand, the ceremonial dressing up of cult images with colourful garments and jewellery may also have given rise to simulating the actual adornment and give it a more permanent presence. The dressing up of representations of deities appears to have been common to all cultures of Egypt and the Near East.

The one real problem for us when evaluating the nature of polychromy in ancient times is colour itself. Its often illusive nature means that it sometimes leaves only traces that resemble an after-image rather than the fully satiated colour array that once must have been in evidence. The latter is hard to recapture. Pigments rub off, or fade, or their basic colour value may alter. Even the language of colour – that is, colour terminology within each language – appears to be incongruous and not infrequently confusing, at least to the modern way of thinking. Carefully researched and executed reconstructions of polychromed sculptures may bring about a better understanding of how different cultures saw and experienced colour and what value they placed on colour in sculpture.

Notes

[1] Herodotus, 2.35.
[2] See Patrik Reuterswärd (1958), *Studien zur Polychromie der Plastik: Ägypten*. (Stockholm : Almqvist & Wiksell).
[3] Prince Rahotep was the son of a Fourth Dynasty pharaoh.
[4] The Egyptian sculptor was referred to as "He who keeps alive". See Heinrich Schäfer (1986), *Principles of Egyptian Art.* (Griffith Institute, Oxford).
[5] Siegfried Morenz. (1973),*Egyptian Religion* (Cornell University Press, Ithaca, New York), p. 87, "There were two main forms relating to the actual divine service in Egypt: daily care of the image and festival."
[6] See John Baines's Introduction to Schäfer's *Principles of Egyptian Art.*
[7] Morenz (1973), p. 87.
[8] Ibid., p. 88.
[9] See Chapter 7.
[10] John Gwyn Griffiths. (1980), *The origin of Osiris and his cult.* (E. J. Brill, Leiden). Griffiths notes that Osiris's role was that of a "Father to the King". When the king dies he becomes Osiris.
[11] The Sumerians chose lapis for the beard (a good example is the bearded bull from the front of the golden harp found in the Royal Cemetery of Ur (British Museum). On orant figures the beard was sometimes painted blue.
[12] See Mohammed El-Saghir, "Das Statuenversteck im Luxortempel", in *Antike Welt*, 22 (Special Issue 1991), in which he reported on the find of Atum and Haremhab (1319–1307 BC). Altogether five statues were found, still showing blue paint covering face and beard. On drying out, the layer of pigment peeled off. The figures are of diorite.

[13] Hans Gerhard Evers (1929), *Staat aus dem Stein*. (München: F. Bruckmann). Evers comments that "Staat, Plastik und Relief stehen in Ägypten unter ganz verschiedenen Gesetzen" – high reliefs are missing, only the Twelfth Dynasty attempts anything like it.
[14] Rudolf Anthes (1986), *The Head of the Queen Nofretete*. (Gebr. Mann Verlag, Berlin).
[15] William Kelly Simpson, "Egyptian sculpture and two dimensional representation as propaganda" in *JEA*, Vol. LXVIII (1982), p. 267.
[16] See Winfried Barta.(1970), *Das Selbstzeugnis eines alltäglichen Künstlers: Stele; Louvre C14*., Vol. 22. Münchner ägyptologische Studien. Berlin: B. Hessling.
[17] Roland Tefnin (1991), *Art et Magic au temps des Pyramids: au temps des Pyramids : l'énigme des têtes dites 'de replacement'*. Bruxelles : Fondation égyptologique reine Élisabeth.
[18] Papyrus Harris: Twentieth Dynasty: Ramses III, Vol. IV, p. 219, no. 451: The condemned of the Fourth Prosecution: "Persons upon whom punishment was executed by cutting off their nose and their ears, because of their forsaking the good testimony delivered to them. The woman had gone; had arrived at their abode, and had there caroused with them and with Peyes. Their crime seized them."
[19] Edna R. Russmann (1989), *Egyptian Sculpture: Cairo and Luxor* Footnotes. Reserve Heads: Cairo, JE 46216 from Giza, and Cairo, no. 32; see Joan Knudsen, "A question of paint: an investigation into traces of paint on the reserve head from the tomb of Ka-nofer" in *ARCE* annual meeting (Memphis 1987) Programs & Abstracts, p. 34 and "Further investigations into the paint on the reserve head from the tomb of Ka-nofer" in *ARCE* annual meeting (Chicago 1988) Program & Abstracts, p. 31-32.
[20] The myth of the two feuding brothers, Horus and Seth, each trying to succeed their murdered father Osiris.
[21] The Shabaka Stone (BM n° 498) is a heavy, near black block or slab of "Green breccia" from Wadi Hammamat named after Pharaoh Shabaka (*c*. 712– 698 BC), who ruled in the Twenty-seventh Dynasty (*c*. 716–702 BC) and who is mentioned in line 1 of the inscription (the titulary).
[22] Major Sandman Holmberg (1946), *The God Ptah*, Lund: C. W. K. Gleerup, p. 71 (12.1 seq.).
[23] When Imhotep, the architect and adviser to Djoser, revealed his outstanding creative gifts, he was thought of as the son of Ptah. Later generations deified him and made him into a cult figure.
[24] Mummies have been found which had been wrapped in a shroud on which the person's image was then painted in green in anticipation of the body's renewal in the after-life.
[25] A mould was found in tomb 62 of King Tutankhamon's burial place, Western Thebes, 18th Dynasty, New Kingdom. The exhibit is in the Cairo Museum. It is a wooden figure imitating the outline of Osiris. The mould was filled with earth and

seed corn; germination of the seeds symbolised the resurrection of the god of fertility.

[26] Cited in Adam Wasserman. 2010. Publ. by Adam Wasserman, Sarasota, FL. *Two Sides to the Coin: A History of Gold*, p. 48.

[27] Pamela Hatchfield and Richard Newman, "Ancient Egyptian gilding methods", *Gilded Wood. Conservation and History*, ed. Deborah Bigelow (1991), Publ. by the American Institute for Conservation of Historic and Artistic Works. Madison, Conn.: Sound View Press.

[28] Ibid., p. 29.

[29] See above, footnote 14.

[30] See Chapter 7 "Early colour symbolism and colour theories".

[31] W.M. Flinders Petrie (1892), *Medum*.

[32] "The diversity of newly discovered deterioration patterns in ancient Egyptian pigments: consequences to entirely new restoration strategies and to the Egyptological colour symbolism", by Solveig Schiegl, Karl L. Weiner and Ahmed El Goresy in *Mat. Res. Soc. Symp. Proc.*, Vol. 267 (1992), Materials Research Society.

[33] Ibid., pp. 842, 856. "The here reported chemical reactions lead to formation of secondary materials of different colour hue than in the primary glazes and pigments. Consequently, many decorations display now colours which are entirely different from those intended and originally applied by the ancient artists. Especially there is always the danger of incorrectly considering green chromatic materials as primary pigments."

[34] "Ancient Egyptian pigments from wall paintings of tombs and temples: technologies of production and their possible provenance", by H. Jaksch, M. Abdel Razeq and A. el Goresy, in *Abstracts of Papers. Fourth International Congress of Egyptology.*. München 26. August–1. September 1985.

[35] See also the resume "Reconstructing the ancient technique for producing green frit and Egyptian blue", by D. Ullrich, in *Abstracts of Papers.. Fourth International Congress of Egyptology*. München 26. August–1. September 1985, pp. 244–246.

CHAPTER THREE

GREEK SCULPTURE: ONCE BRIGHT AND SHINY

> There are few subjects in the field of ancient art which have aroused such heated and prolonged controversy as polychromy in Greek sculpture.[1]

The subject of polychromy in Ancient Greece has been much debated – particularly during the nineteenth century, when scholars were still focusing on the question of whether the Greeks painted their sculpture.

What led up to it? In 1784 J.J. Winckelmann published his *History of Art of the Ancient World*. In this inspired work the author did not even raise the issue of polychromy, as though colour belonged to painting alone and had no role to play in the plastic arts. Half a century later the French scholar Antoine-Chrysostome Quatremère de Quincy was the first to address the problem of colour in sculpture in his detailed study *Le Jupiter Olympien* ... (1815). The German architect Gottfried Semper (1803–1879) wrote later that Quatremère gave us the abstract theory of polychromy and explained that in his time scarcely anything was known or discovered about the existence of those traces of colour in the architecture and sculpture of antiquity with which we are now acquainted.[2]

It was Semper who initiated the long debate about polychromy in Greek sculpture and architecture to which at first French, German and English scholars contributed in their respective languages. By around the middle of the twentieth century much of the material was brought together and evaluated in two major studies. The first of the two monographs, an unpublished thesis, dates back to 1949.[3] The second study was published in German in 1960.[4]

Although the initial question, whether sculpture was painted in ancient times, had been settled in favour of polychromy during the long debate to which, notably, archaeologists contributed because of their direct contact with the cultural remains, some related issues continued to preoccupy scholars. They began to ask questions about colour technology and techniques. Traces of colour, ghost-patterns and the differently preserved surface areas on the same figure made conservators look carefully at the

methods of preservation and the origin of the material used. Art historians sought confirmation elsewhere and ancient writers alluded in their texts to the practice and tradition of polychromy. It is now possible to concentrate on yet another probing question: why did the ancients colour their sculpture?

The reasons are manifold but it is often beyond our ability to provide a satisfactory answer, for the evidence of colour does not necessarily reveal the motive behind this convention. Polychromy is as much a cultural phenomenon as it is a manifestation of social desires and expressions. However, we may be certain that there were circumstances and also intentions that fostered the development of coloured sculpture. An anecdotal remark retold by Pliny the Elder suggests that sculptors and painters long before his time agreed on what was acceptable as an appropriate finish for sculpture. Praxiteles, when asked which of his many statues he most liked, apparently answered that he esteemed most the ones painted by Nikias, for he gave the figures their finishing touch.[5] At least two points may be inferred from this remark: firstly, statues were only thought to be complete when also painted; secondly, such a finish was part of the creative process that was begun by the sculptor and concluded by the painter. Nikias had made a name for himself as an artist and therefore Praxiteles was also commenting on the quality of the finish his statues had received. We have no further knowledge about their appearance or about their former setting.

Since those early days of surveying ancient sites in Greece and southern Italy, many attempts have been made to reconstruct their original appearance and to give the visual presentations their appropriate colour schemes. Although the artist's impressions of the numerous reconstructed monuments may be incorrect in detail or even exaggerated in their overall conception, they nevertheless give a good idea of a very colourful and convincing sculptural setting. Sculptures are now often seen detached and isolated from their true physical and cultural environment, which hardly does them justice.[6]

Often it takes a leap of the imagination to put them back into context: the cult figures of the temples, the statues, stelae or sarcophagi placed around the acropolis, the agora, or the necropolis express a people's commitment to religious beliefs, to the state, to the memory of man's heroism, and also to various myths in which his existence is rooted. Gods, men, monsters – all have their place in this creative scheme. At first, ill-defined and crude, they gained in expression; and the renderings in stone or impressions in clay, caressed with a few colour-laden brush strokes, became life-resembling images. Who the early image-makers were, where

they were active and when they lived is by now well documented. What has been retrieved from the past has been classified and labelled. We recognise the imprints, thus stylistically grouped, of successive periods, the artefacts of one culture that succeeded another, the shoots and roots to which our own culture is attached. So we probe from the topsoil down into layers known and referred to as Graeco-Roman, Hellenistic, Classical, Archaic, Geometric and (much later), for want of more positive pointers, the Dark Ages.

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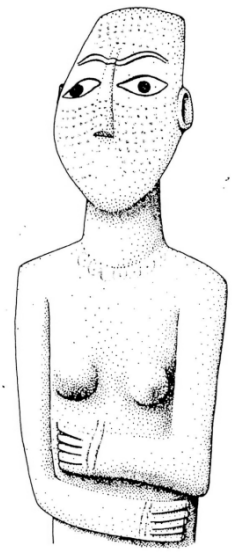

Fig. 3–1 Drawing of a Cycladic marble figure showing tattoo or paint marks; canonical type (Spedos variety); 2800–2300 BC. Unknown source.

At Mycenae the flowering of culture falls into the beginning of the second millennium BC, seeded by an even richer crop which matured and was brought to waste at Crete, where the Minoan culture had once flourished. What remains of it after almost three thousand years still delights: the bright colours, the free-flowing designs that carry the actors on an emotional crest from one scene into the next, the joy and vitality that bounce back from the walls. There is no space set aside for sadness, not

even on the exteriors of sarcophagi, for they too are decorated in full colour, witnessing to the energy of life.

To the north-east of Crete are the Cyclades, which break up the expanse of the Aegean Sea. On these islands were discovered small marble figurines that have a distinct style of their own. They have been worked with purpose and care; each shape is reiterating a set of abstracted perceived characteristics of man or woman. Serene and self-contained, the images charm. Some of these carvings show sophisticated tattoo designs. Nothing similar grew out of mainland Greece. When it was their time the Dorians, who pushed south from the north down into the Greek peninsula, brought the Dark Ages to a close and with energy and thrust laid the foundations of a new civilisation. City-states and cult centres emerged, trade expanded and colonies were established; the names of powerful cities such as Argos, Thebes and Corinth were spoken of in – among other places – Al Mina[7] and north Syria (ancient Carthage) when these became Greek trading-posts. Along the east coast of Sicily and Italy Corinthian colonies were set up. Still further to the north, facing the Tyrrhenian Sea, Etruria began to be influenced by Greek culture. The early plastic and decorative arts were at first characterised by their geometric shapes or patterns, which gradually came to include freer design elements.

In all of the places mentioned evidence of polychrome sculptures has been found. However, we shall set out to explore some of the characteristics of these painted figures by first memorising the design and colours of a plaque that probably once adorned one side of an altar in Syracuse, Sicily. The buff-coloured clay relief of the monstrous Gorgon who still carries one of her two children, the winged horse Pegasus, has been covered in a pattern of vivid blue and red. Eurydale (meaning wide leaping) is the name of the monster who is jumping straight out of ancient mythology. Her hideous, nightmarish nature is here fused with a certain beauty of decor. The turned-in curves of her wings and the fan-like pattern of blue and red feathers suggest a propelling force. Her short skirt is accentuated by a double row of geometric designs; her right sleeve and shoes continue this variance of pattern. One half of her face is still framed with the blue curls of her hair. Her one painted eye, wide open, with its concentric circles of blue, white and red, fixes the victim with her gaze. The symmetrical arrangement of the upper half of the relief and the forward thrust to the left of the Gorgon's lower body are highly theatrical. The relief has been restored, for there is an empty space under her right arm that once clasped Chrysaor, her second child.

Fig. 3–2 Pediment with carved figures in relief. A running Gorgon is flanked by two lions, with smaller figures filling the remaining spaces. From the temple of Artemis, Corfu (Kerkyra) ; 600–580 BC. Limestone.

The Gorgon is a popular subject and appears in many early decorations. Homer speaks of the Gorgon most commonly as a decoration and only once as a living monster.[8] While the Syracusan Gorgon of the later seventh century familiarises us with the Archaic convention of pattern and colour distribution within a design – which was meant to express fierceness and dread – another example, now lacking its surface decoration, may by comparison show to what extent colour contributes to the expression.

Nearer to the mainland, at Corfu, the temple of Artemis (about 580 BC) had on its west pediment a composition of a Gorgon with her two children who are flanked by two leopards, with the rest of the low triangular space filled in by smaller groups of fighting figures. In the background behind the running monster, now without her wings, is a portion of an incised pattern with only traces of colour remaining. We may assume that the Gorgon was painted in blue and red, but nothing of this pattern remains. The design of the relief, though bold and ferocious in concept, would not have conveyed the same impression either from below or from a distance without its paint finish. Although light and shade create contrast and help to offset the fully carved figure against the plain background, the subtler carvings showing eyes and eyebrows, and the pattern on the dress, would probably have blended in with the shade of the stone.

One of the pediments on either end of the Athena temple of the Acropolis at Athens (*c*. 550–540 BC) once again picks up the theme of the monster, now with two large felines. However, the best preserved colours may be found on the two smaller groups tucked into the elongated corners of the triangular gable: the triple-bodied monster and Herakles fighting Triton. The paint has been laid on over a layer of smoothed plaster, the usual preparation for limestone carvings, and here it is still visible. All the colours used on the triple-headed monster may still be discerned. Hair, as

with the older Gorgon, and beards are blue, although the head in the middle has white hair. The flesh is ruddy, while the skin of their twisted tails is decorated with blue-, green- and ochre-coloured scales. The eyes still show some black colour. There is no doubt that, when the colours were still fresh and bright, the effect must have been quite dramatic.

Temples, while still only of wooden construction, were painted or decorated along the edge of the roof with coloured clay plaques. These antefixes, while protecting the ends of the rafters, also added some colour to the edifice. Modelled acroteria (plinths) at each corner of the gable also livened up the severe style of the early Doric temple. The antefixes were perhaps in the shapes of palmettes, or they were masks or heads of monsters or lions. During the classical period, figures in the round sometimes adorned the roof.

Numerous features typical of the original wooden entablature of the roof, where their invention had been of structural necessity, were retained when temples were built entirely in stone. They became purely decorative elements which were often picked out in colour, for instance the triglyphs or metopes. The two pediments, the metopes or the entire course above the architrave became thus the main areas for sculptural embellishment, always blending in with the overall architectural design.

What seems characteristic of this development is that while there was obviously a need for some kind of finish to protect as well as improve the appearance of the timber, the coloured additions remained a feature even when a more weather-resistant material, such as stone, was introduced. From then on, stone carvings became an established feature of temple designs, evident as early as 580 BC, when one of the first stone temples was erected at Corfu. From the beginning colour played a role. While at first decorating the flat surface following the incised forms of drawing, it gradually became part of the ever expanding volume of relief, to the point of embellishing the figures in the round that began to fill the pediments. Similar to the function of a proscenium, they prepared the visitor for the big cult event around and inside the temple.

The temple, the altar and the grave, and also the theatre, were the main cultural focuses of the ancient Greeks. Like the altar and the temple, the stelae or grave marker stood out from its environment, reaching sometimes a height of 3 to 4 metres. It usually bore a relief or an inscription, or was simply painted with a subject related to the person commemorated there. These stelae are important to the study of polychromy for they, like temple sculpture, constitute our primary source material. On some there is still enough evidence of paint for the restorer to reconstruct their original appearance. Three stelae providing particularly interesting examples will

be discussed; they come from Attica, where the combination of figured scenes and epigrams is most evident.

Fig. 3–3 Grave marker of a youth and little girl, with capital and finial in the form of a sphinx. Archaic, *c.* 530 BC, Greek, Attic. Marble with traces of paint; total h. 423.4 cm. © Metropolitan Museum of Art, New York, accession no. 11.185. Credit: Frederick C. Hewitt Fund, 1911; Rogers Fund, 1921; Munsey Funds, 1936, 1938; and Anonymous Gift, 1951.

The art historian Gisela Richter, who studied Greek sculpture – notably Attic grave monuments – thoroughly, reconstructed a sixth-century stele of a brother and sister, which represents an outstanding example of its type in every respect. This tall monument has an overall height of over 4 metres

(from the square base upon which the shaft rises, with its voluted capital in support of the stone carving of a sphinx). This stele is the most complete of its type extant and also one of the most impressive surviving monuments of Archaic art. It documents the cultural and social importance of grave markers which the wealthy aristocrats of Attica erected to their dead. On the sphinx (which is in a seated position, her head turned sharply to the right) there are still numerous traces of colour: red on her hair, on her irises, also on her necklace and on the background of the meander pattern of the head-band. The eyebrows are painted in black. Then, alternating in red and blue, are the lozenges which suggest breast feathers. All are edged with black. In red are the feathers of both wings (outer faces only), and red again covers the projection at the back of the forelegs and the parts of the rear of the sphinx, while blue embellishes the tuft of her tail. On the shaft of the stele very little colour remains but the relief is still in good condition. It shows a naked youth, with his left arm raised, holding a pomegranate. In the space below his arm and reaching to his waist is a small girl, dressed and clasping a flower. The base is inscribed with an elegiac couplet which attests to their aristocratic background.

A second stele supports the image of a sphinx and a monster. To give a description of the sphinx, it shows traces of colour on its hair, which was originally black. The feathers of its wings were carved in relief and painted alternately green, black, red and blue; those on the breast form a scale pattern and are arranged in rows of red and blue scales. The rib of the wing and the flat moulding at the top of each foreleg are green. The design of the capital is based on a lyre made up of two double volutes, with palmettes in the interstices. The whole composition is richly decorated with incised and painted patterns. A large lotus and a palmette pattern are painted on the reverse side of the volutes. Copious traces of alternating red and black colour have survived. The monument belongs to the first half of the sixth century BC and it was set up in commemoration of a youth. On the shaft is his image in low relief. He is shown in the nude, referring to a custom that arose during the second Olympiad (seventh century BC), when young athletes competed in the races naked.

The third grave marker, known as the Aristion stele, shows in relief a warrior in side view facing ahead. He is holding a spear with his raised left hand; his left leg is forwards. He wears a chiton, a cuirass with shoulder-pieces, greaves and an Attic helmet. The stele has inscribed on its plinth "the work of Aristokles" and dates from around 510 BC. There are traces of red colour on the background of the relief and on the hair, beard and lips of the warrior. Some blue pigments still adhere to the helmet and on the cuirass; on the latter is also visible the ghost-pattern of a lion's head

and a star. These ghost-patterns are sometimes due to a different rate of weathering of the surface. The finial of this stele is missing but was probably a palmette.

Sometime after the middle of the sixth century the impressive sphinx-type monument changed into a simpler form of more modest size. The mighty sphinx capital was converted into a palmette surmounting a pair of volutes and the whole was finely carved. The shaft was generally decorated with the figure of the deceased, either in relief or incised, or merely coloured. The dedication was inscribed on the base, occasionally elsewhere. These are expensive private memorials. In Attica no memorials were erected for a period of about fifty years, from about 500 to 450 BC. This followed an edict that no monuments that were destroyed during the Persian war should be rebuilt. We know from other sources that polychroming could nearly double the cost of a carving.[9] (The decree applied, of course, only to Attica and polychromed sculpture continued to flourish in other Greek states.) The stiffly posed nude youths represented on the shafts of sixth-century stelae are the counterparts in relief of the Archaic statues of young men (*kouroi*) to which we now turn.

The *kouroi* are grave statues or memorials. The development of style in the *kouroi* is the same as that of the stelae – that is, they developed from the schematic to the naturalistic, from the massive to the elegant and refined. The Kroisos *kouros* belongs to the second half of the sixth century; it is of Parian marble and its base survived inscribed with an elegiac couplet: "Stand and weep by the tomb of Croesus dead, whom rushing Ares destroyed one day as he fought in the forefront."[10] It is believed that Kroisos belonged to an aristocratic family, the Alcmaeonidae, who on returning from exile in 528/7 set up this monument in honour of their young hero, who died in the battle of Pallene (546 BC). Kroisos stands proud and manly, but the glow of his flesh and his firm gaze have vanished. The convention was to have hair, eyes, eyebrows and lips coloured, but the earliest carvings – which usually were of porous stone – were often covered first in stucco and then painted. The flesh received a red-brown tint which was probably mixed into the stucco before it was applied to the figure.

The fine marble of the statue of Kroisos shows no trace of any surface application, but the carving is well preserved. Whether the Parian marble was once completely covered with stucco or just paint was a source of discussion among scholars for a long time, for they shared the opinion of Neo-Classical sculptors that marble was too precious a material to be covered up. The ancient sculptor, however, had a different perception of material and finish. In fact, in the literature that has come down to us,

circumlitio (i.e. "the covering in paint") is mentioned. Vitruvius, Pliny and Plutarch all refer to statues being stuccoed and painted, and they also mention a technique known in Greek as *ganosis*, which is the application of Punic wax to the surface of marble statues or walls.

The reason given for its use is that it protected the red colour from fading when exposed to the bright light typical of Greece. Vitruvius, referring in the first instance to architecture, describes the technique in these words:

> But if anyone should wish the red finish to retain its colour he must, when the wall is finished and dry, rub over with a stiff brush Punic wax melted and diluted with a little oil; and afterwards with live coals in an iron vessel heat the wall so thoroughly as to make the wax tacky and then smooth it; then rub it down with a candle and clean cloths, just as nude marble figures are treated. The protecting coat of Punic wax prevents the light of the moon and the rays of the sun from licking up and drawing the colour of such polished finishing.

In a more direct reference to sculpture Plutarch[11] states that the ganosis of the statue of Jupiter Capitolinus was necessary, for the red ochre with which they used to colour ancient statues soon fades. Out of necessity the Greeks finished their monuments with a protective layer of colour or wax.

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The standing draped female figure, the kore (maiden), was also exposed to every kind of weather and its colours required some form of protection. But there is no indication that ganosis was already part of the finish during the early Archaic period, when porous stone carvings were stuccoed and fully painted. The kore received far more colour then was possible with the nude *kouros*. Apart from hair and facial colourings, her dress was painted with either a vivid red or blue. A coloured pattern emulating embroidery was always present. Its geometric design was first incised on the stone.[12] The maidens were usually adorned with painted necklaces and earrings in colours matching those of the dresses.

The kore of the Acropolis at Athens started as a column-like figure with her arms held close to the body, or perhaps with one arm raised to chest level. The earliest are dressed in simple full-length garments of heavy cloth. The peplos is fastened with a pin or brooch at the shoulder and a belt gathers the loose dress in at the waist. Embroidery or a woven pattern runs along the hem and neckline. As at any other period in history, fashion changes. The peplos gave way to the chiton and the mantle, which were of lighter material, falling in more numerous folds. These untailored

clothes were pinned in a variety of stylish ways. The edge of the mantle and the front as well as the shoulders and sleeves of the chiton are always offset with a strip of differing width that has a geometrical pattern of two, or occasionally three, colours. A pattern of scattered flowers or abstract motifs on a white background livens up the dress or mantle of the kore which was carved in Parian marble and is less solidly covered in paint.

Again red and blue dominate all the colour schemes during the Archaic period; but white, light green and light blue are additional shades with which an abundance of designs was achieved. As the dress style became more elaborate, so did the maidens' coiffure. The simple hairband was replaced by the polos – a crown – or some floral decoration. On free-standing sculptures these are made of metal and occasionally separately attached, like the earrings or the objects they hold in one hand.

Modern reconstructions of polychromy in Greek sculpture have made it possible to assess the appearance and impact of such figures. The Museum of Classical Archaeology at Cambridge was responsible for two by now well-publicised painted casts, the Auxerre goddess (*c*. 650–625 BC) and the Peplos kore (*c*. 530 BC) with its stephanos (a disc mounted on the head of the figure to protect it from damage by birds). The first reconstruction of the Peplos kore shows a harmonious blending of forms and colours. The glowing red of the dress radiates the warmth of the body, while the formal pattern of green palmettes and spirals on the hem of the peplos, together with the vertical pattern on the skirt, emphasises the tranquil pose of the maiden. A green neck-band complements the red shoulder-length hair. Her eyebrows, pupils and eyelashes are black. The skin of her arms and face is light and in contrast to the darker complexion of the male statues. (The colour scheme and pattern of another plaster cast of the Peplos kore differ in detail.) The original but damaged figure of the Peplos kore which is in Berlin shows several noteworthy features. The head and earlobes have drill holes for decorations made of metal which were separately attached, like the pomegranate which she is holding. The left arm is missing; what is visible is a well-prepared cavity for jointing the lower arm to its upper part.

Joining materials is not an unusual practice in sculpture, particularly during the earlier periods when the required size or quality of material was unavailable and a compromise solution had to be found. Building up a larger piece of sculpture from several smaller blocks of stone, or combining wood and marble, was common enough; and although such acrolith sculptures have, like wooden sculpture, rarely survived intact, we can see from stone statues that the skill existed to make accurate joints. How well the sculptor fitted different materials together can be gathered

even from these early sculptures, many of which once had inlaid eyes of crystal. The empty eye sockets indicate that the eyes were not always carved and were painted black, red, green and blue, as on a statue of Athena. Throughout the history of figurative sculpture, the eyes have presented a particular challenge, inspiring varied solutions.[13]

One other kore deserves a closer look. The Kore Phrasikleia, a grave statue from Myrrhinus in southern Attica (*c*. 540 BC), shows in great detail how the pattern of the meander border and the rosettes was incised into the marble, a preparatory technique for polychroming. This seems to confirm that polychromy was no mere afterthought but a well-planned and integral part of the making of sculpture.

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The *Athena Parthenos* is a female statue of a quite different size and complexion. The original statue which Phidias made for the Parthenon of the Acropolis exists no more; all we have are descriptions and a small-scale copy, the ancient Varvakion statuette, which is a very much reduced version of the image of Athens' patron goddess. A modern reconstruction of the Athena Parthenos to the scale of 1:10 was made by a Canadian archaeologist in recent times and is now exhibited in Toronto. When during the mid-fifth century BC a new temple, the Parthenon, was begun on the Acropolis, Phidias was commissioned to design for it a standing cult image. It took him eight years to complete the work (438 BC). About 12 metres in height, the figure was made of thin plates of gold and ivory, and the core was of wood. The chryselephantine statue presented an investment of 40 talents of gold, which is about 1 tonne in weight, and the gold was removable in case it was needed for something else. The Canadian model shows this formidable cult image dominated by the two light and bright colours, gold and ivory, with touches of a dark colour for eyes, eyebrows and other details.

The Varvakion statuette of just under 1 metre is of Pentelic marble. There are traces of colour – red, yellow, yellow-brown and brown – on various parts of the figure and on the attributes she is holding. There are also traces of gold on her hair, bracelets and the hem of the peplos, which suggest a rather more colourful appearance than that of the Canadian reconstruction. However, the yellow to brown shades may have been in imitation of gold.

Fig. 3–4 *Elgin Marbles* from the east pediment, KLM Parthenon. © Trustees of the British Museum, London.

Plutarch also attributed the sculptural programme of the Parthenon to Phidias. The attribution is doubtful, although he probably designed the sculptures for the pediments. A large proportion of the Parthenon sculptures are now in the British Museum after their acquisition from Lord Elgin during the nineteenth century. Were they ever polychromed? Following the convention of temple decoration, the answer must be yes. But if they still had some colour traces left when they arrived at the British Museum, these are now lost; the sculptures were scrubbed clean with soap and water before arranging them for viewing on their arrival.[14] More recently the sculptures belonging to the east pediment of the Parthenon (also now in the British Museum) were re-examined and brush marks were found in crevices, indicating some form of application. Scientific tests indeed confirmed that the sculptures had been coated with a solution.[15]

The second gigantic cult statue for which Phidias was responsible is the Zeus of Olympia. Like the Athena Parthenos, the statue of the seated god was made of gold and ivory, and again this statue did not survive into the modern era. The Zeus temple was the biggest on the Greek mainland at the time. As Strabon noted,[16] the Zeus by Phidias was so big that, although the temple was very large, the artist seems to have miscalculated the scale. He designed the Zeus seated, yet the god nearly touched the temple roof – no space was left for standing up. The 12-metre-high Zeus statue was nevertheless admired as one of the seven wonders of the ancient world.

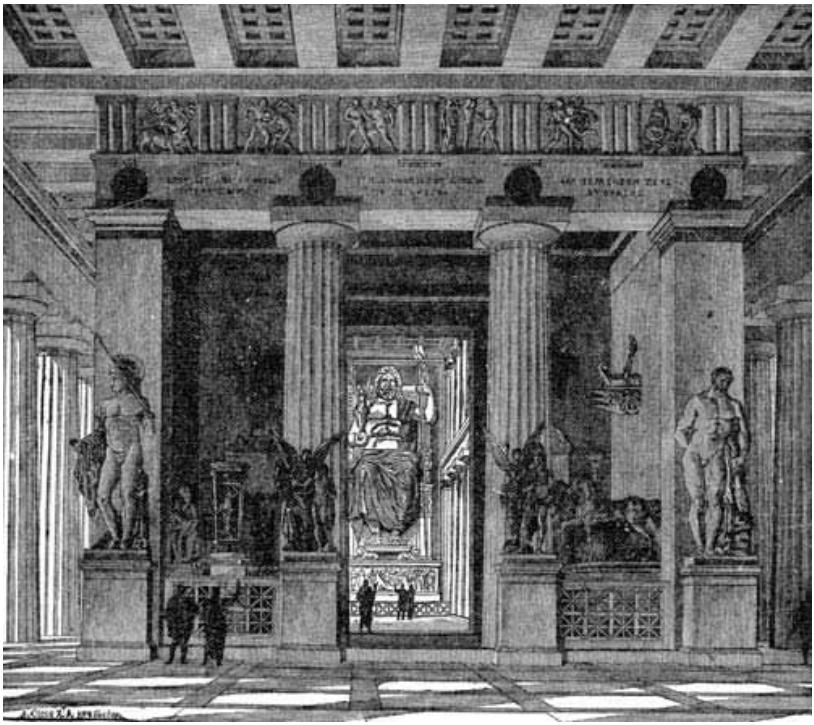

Fig. 3–5 View of a spacious Greek temple interior with a huge sculpture of the enthroned Zeus at the far end. Print. Unknown source.

Quatremère de Quincy (1815) and Victor Laloux (1883) presented reconstructed views of the cella (the inner area of the temple) with a statue of an enthroned Zeus. Laloux's colourful representation of the god is impressive but probably exaggerated. A modern critic commented that the reconstruction reflected the taste of the 1880s rather than what archaeology revealed. This may be so, for the workshop which Phidias had especially erected for the purpose of constructing his oversized sculpture came to light only more recently. Smaller items such as coloured glass inlays were found in the debris.

The whole ensemble of god and throne was of gold, ivory, ebony and precious stones; the golden garment was inlaid with designs of figures and lilies. The throne was decorated with scenes from Greek mythology. Groups of smaller figures were placed on and around the throne and the footstool was made up of lions on which the platform rested. The area in which the throne stood was covered with blue-black stone slabs, each

surrounded by a white marble border. Over the polished stone was poured oil, for evaporation, to prevent the statue from drying out. As with the Athena figure, the gold and ivory could be detached from the wooden core of Zeus who constituted, and guarded, the wealth of the state. It was daring to use these costly materials on such a scale; although chryselephantine works of art were not uncommon, they traditionally belonged to a different class. Quatremère de Quincy in fact revived an ancient description for what he called the third branch of sculpture: *toreutique*. This is the art of working in metal or ivory, including embossing work in relief, chasing gold, silver or bronze, and combining metals with different materials – particularly with ivory. As he was writing about polychromy, he was pointing out the rich colour effect obtained by combining diverse materials, each one with its own characteristic colouring. The sculptor was really composing an image with all the means available to him. This leads us to examine bronze statues and their contribution to colour in sculpture.

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Works in metal may be as rich in colour as stone carvings, for there is much variation in the natural colouring of both materials. Obviously green or pink marble has to be found and made available. The same applies to metal; the foundry worker has to know how to obtain the colouring desired for his cast.

When mixing two or more metals, the resulting alloy has distinct properties which are often sought after by the metal worker. On its own, a metal such as gold is admired because it is easily worked and noncorrosive, and its colour remains untarnished. Each metal – be it silver, copper, tin, lead or gold – is, firstly, a commodity to which a cost is attached; secondly, it offers various possibilities. Bronze is an alloy that may be worked into a statue. Hammering sheet metal to become an image, a sphyrelata, is a very ancient art. Sections of the figure, when shaped, were pinned onto a wooden core, or riveted to the next piece. Solid and hollow casting are the other methods of creating metal sculpture. Whatever the colour of the cast, its final appearance can be modified or altered. Pliny gives the following account:

> The artist Aristonidas, in a statue representing Athanas after the murder of his son, sought to depict fury giving place to repentance, and mixed copper and iron, that the rust might show through the metallic lustre of the copper and express the blush of shame; this statue exists to this day at Rhodes, where also a Herakles which Alkonbe thought himself to cast in iron, in allusion to the fortitude of the God under his labours.[17]

The same author also mentions another alloy, Corinthian bronze, which will be briefly discussed here although it was probably not invented before the second century BC. It was an alloy of a specific composition that gave a golden sheen to the cast. Plutarch is said to have admired the beauty of its colour, untainted by verdigris and rust. (He also referred to the blue tinge of some statues of sea captains at Delphi.)[18] The alloy was of silver, gold and copper. True bronzes are an amalgam of copper with tin, with lead added. By piecing together information from Greek, Latin, Hebrew and Aramaic texts, a research team, which also made some experiments, came to the conclusion that by adding to the bronze as little as 15 per cent in volume of gold, an effect comparable to mercury gilding – a technique known to the ancient Greeks but which required less gold – could be achieved. The alloy was said to have been accidentally discovered when vessels of various metals melted together in a massive fire. From the fourth century BC Corinth was renowned as a centre for the manufacture of bronze, but Corinthian bronze need not have been a product of Corinth. Wherever it was initially produced, this is how Pliny described this desirable alloy:

> There are three kinds of this sort of bronze: a white variety, coming very near to silver in brilliance, in which the alloy of silver predominates; a second kind in which the yellow quality of gold predominates; and a third kind in which all the metals are blended in equal proportions. Besides these there is another mixture, the formula for which cannot be given, although it is man's handiwork; but the bronze valued in portrait statues and others for its particular colour, approaching the appearance of liver and consequently called by the Greek name hepatizon meaning "liverish", is a blend, yet a long way in front of the bronze of Aegina and that of Delos which long held the first rank.[19]

However the colouring of bronzes was obtained, it had to satisfy an ideal which, at that time, was a preference for a golden hue rather than a sea-green patina. To maintain the brightness of bronze figures their surfaces were either oiled and polished or a layer of thinned bitumen was applied like varnish over the golden lustre,[20] although this may in fact have assisted the natural patination of the bronze.

Quite a number of classical bronze statues, some of which were retrieved from the sea bed in remarkably good condition, show that inlays were part of the sculptural concept. The two bronzes of nude warriors found at Riace[21] in southern Italy show how calculated the effect of inlays was. With just a few extra touches of colour a feel of life and health has been added to warrior A. His bronzed chest is studded with two red copper nipples; the same red brightens his lips, and through the open mouth shine

the silver plated teeth. The white orbs of his eyes contrast with his dark face. Coloured glass paste for the irises and drilled holes for the pupils complete the realistically modelled eyes, which also have eyelashes cut into a bronze plate. Unlike the hair of marble statues, his is the same shade as the rest of the head and body.

Fig. 3–6 Stone of a ring showing, in intaglia, an artist painting a sculpture (Roman) (81.6.48). In *Heilbrunn Timeline of Art History*. New York: The Metropolitan Museum of Art, 2000–, http//www.metmuseun.org/toah/works-of-art/81.6.48 (April 2007).

Archaeologists have found separately modelled lips, bronze plates with eyelashes and the different components of eyes.[22] Empty eye sockets in portraits give a mask-like appearance, an effect the sculptor must have wanted to avoid, as is evident on contemplating a portrait that is still complete. Eyes are the mirror of the soul; they express and communicate

an inner life. Their colour attracts and animates a face. Modelling the eyes and giving them their full expression has been one of the biggest challenges to the portrait sculptor. Two essential features have always preoccupied him: the fixing of the direction of the gaze and the conveying of the glossiness of the eyeball. The use of rock crystal and polished, coloured material, and also the depth achieved with the drill, were the means that assisted him in creating an ever more realistic copy of that feature which dominates the appearance of a person. Yet the sculptor striving towards greater realism was well aware that the successful modelling of eyes is sometimes found within the parameter of impression rather than expression. The shape and the indication of direction often suffice, if in agreement with the general conception of the modelled representation. Greek statuary, on the whole, does not overemphasise any single feature lest it seems out of keeping with the intended overall impression.

Each sculptural material promises a different effect because of its intrinsic colour. The sculptor can of course manipulate the material in a manner that brings out every nuance of that colour. Forms and surface texture on which light and shade interact are brought into play. While a high-quality marble may be worked to give either a matt or a high gloss appearance which reveals the hidden colour, clay or terracotta is less rewarding in this respect. Its duller variety almost cries out for colour which, when applied, covers up and enriches its inferior blandness. It is therefore not surprising to find that Greek clay figurines and terracotta sculptures are, as a rule, polychromed.

One of the few large terracotta sculptures is *Zeus and Ganymede*, on which most of the colours are preserved. This beautiful group is just under 1 metre high without its base. It was found at Olympia and is now kept in the Olympia Museum. The mythological subject matter shows Zeus abducting Ganymede, the son of a Trojan king. The cockerel is a love token to the boy. The sculpture was modelled around 470 BC by a Peloponnesian sculptor. Whether it served as an acroterion for the roof of a temple or treasury house, or whether it was erected as a votive image, is unclear. While the colours applied are few, they were adroitly used to contrast, and maybe symbolise, the two characters involved. Zeus, the main god of the Greek pantheon, is given the darker and more distinct hues, whereas the tender youth is painted in lighter shades. From what can be discerned, the mantle of Zeus was red-brown, with a broad black-blue border. His hair and beard were black-blue, his eyes and eyebrows probably black, his mouth red. The youth may have worn a light blue head dress; the colour of his hair, eyebrows and eyes appears to have been light

brown; and his body was of an ochre shade, whereas the skin of Zeus was of a slightly darker complexion. The cock held by Ganymede still shows traces of red on its crest and on some of its feathers.

In an article on the polychrome decoration of Greek terracottas, R.A. Higgins mentioned that terracotta figurines were during earlier phases, 1400 BC to around 700 BC, decorated in the same way as vases, which were given a "black glaze" with additional red and white, and incised lines as noted on stone sculpture. After this period a wider range of colours was used after firing; no vitreous glazes were yet applied. The Attic coroplast was more open to experimentation and polychrome decoration was almost universal. Higgins writes, "From the seventh to the mid-fourth century BC the colours used tended to be vivid rather than naturalistic; for example, a dark red is quite common for male flesh. Later, from the mid-fourth century BC onwards, paler and more naturalistic shades were used." [23]

Before firing, the terracotta figures were dipped into a white slip which served as an underpaint for the colours, which were only occasionally applied directly on clay. The range of colours includes red ochre (haematite) or, less commonly, vermilion (cinnabar); pink (red ochre and chalk); and, after 330 BC, rose madder, yellow ochre, Egyptian blue or blue frit, green (malachite), black gained from either soot or bitumen, and white from chalk or gypsum. Gilding was also sometimes applied.

During the fourth and third centuries BC, and notably at Boeotia, a flourishing industry produced polychrome figurines of the Tanagra style. These terracottas were painted in lighter shades such as pinks, light blues or yellows. None of the pigments was wasted on any parts of the figures that were not in full view (e.g. the *Mask of Dionysus*, which comes from Tanagra and was made about 380 BC).

When discussing the stelae and grave statues we noted that they were usually painted. Indeed, Greek funerary art (including the lekythoi vases and sarcophagi) was polychromed, a concept foreign to the modern mind. Some late fifth-century white-ground lekythoi, meaning "the flowers of death", have survived with much of their colour preserved – such as, for instance, the Attic lekythos from Eretria. It shows a young warrior seated before a gravestone, with a youth and a girl who hold his shield and helmet. The hair of the figures is red or auburn; bold brush strokes retrace in light blue the pediment of the monument in front of which the warrior is seated. The shield also shows some blue, whereas his cloak appears to have been green. The drawing itself is in matt outlines. While the design and brushwork on the vessels are freer, the very nature of the relief on stelae gives those designs their compact and controlled appearance. Many of the lekythoi were found inside sarcophagi which were also richly

embellished with either paintings or sculptural decorations.

Two such stone burial cists, one of the mid-, the other of the late fourth century BC, will help us to form an idea of the changing palette by the time of the classical period. The sarcophagus of the Amazons from Tarquinia (about 350 BC) and the Alexander sarcophagus from Sidon come from very different geographical areas heavily influenced by Greek culture. This Etruscan sarcophagus from Tarquinia (now Archaeological Museum, Florence) has at one end of its cist a well-preserved painted scene showing the Amazons fighting a warrior who is shown in defeat. Most of the colouring is still vivid; the scene is set within a painted architectural framework which is less well preserved. The background against which the three figures are set is black; the floor was probably brown.

The colour distribution is balanced. The warrior is of a dark complexion, whereas the two Amazons are fair skinned, a convention that was upheld throughout the previous five centuries. Alexander wears a light-coloured cuirass with a red tunic underneath. His helmet and shoulder buckles are in yellow ochre in imitation of bronze. With his left arm he holds a shield, its underside being painted light blue. The Amazon to his right wears a red himation; its border and belt are of a lighter shade. The one to his left is red haired; her dress was probably ochre with a red border, although the colour traces are now very faint. Both were given red necklaces and earrings. The paintings have been attributed to a Greek hand, or to that of an artist from a Greek city of southern Italy, writes Ellen Macnamara,[24] who also points out that during the fourth century several important technical innovations appear in painting in Etruria: artists were able to achieve the impression of three-dimensional space and to draw figures in three-quarters view, their volume emphasised by shading and highlights. The art of painting completed what was left unstated in the three-dimensional arts.

The lid of the sarcophagus of the Amazons received sculptural decorations. The pediment has modelled heads at its three corners; the smaller one at the top belongs to a seated male body which fills most of the space, with dogs on either side nuzzling up to him. They, and a floral design filling the rest of the pediment, are carved in relief. The background may have been painted blue or black; the heads still show ochre on their hair and red for eyes and lips. While painting moved towards creating an illusion of space, depth and solidity, sculpture also strived to resemble more closely the objective world it was portraying through the use of colour. Still, the polychrome battle and hunting scenes of the Alexander sarcophagus must have looked impressive when their reds and yellows,

and the blue shades, were still fresh and vibrant as flesh itself, and when the metallic glitter of harnesses, spears and swords seemed to produce an everlasting din. The metal accessories have since been removed; the drilled holes and the patches or faint traces of colour are reminders not only that the flesh inside the sarcophagus suffers corruption, but that the captured expression of life will ultimately also fade into oblivion.

The Alexander sarcophagus is of marble; its tectonic shape has many features taken from Ionic temple architecture. The cist with its carved scenes on all sides sits on a moulded base. The lid has a relief in each of its two pediments. Along the sima is a series of horned lion-cum-griffin heads in imitation of water spouts on temple roofs. Above that course and on the ridge of the lid itself are female heads with diadems made of foliage. On the four corners are acroteri in the form of reclining lions. The architrave is decorated with vine foliage which was once painted yellow and set against a wine-red background. The dominant colours that are still visible on the reliefs are a dark red, purple and pink. Other shades used are light and dark violet, dark and golden brown, yellow and deep blue. Most of these are mixed colours and there is a tendency towards lighter hues. There seems to have been no green.

All the scenes show men in combat with either their enemies or animals. The two warring factions are the Greeks and the Persians, who may be distinguished by their clothes. The background of the reliefs was left unpainted; however, some of the equipment – such as spear, shield or helmet, or the tail-end of a flying coat – have been painted in rather than sculpted, suggesting more depth to the scene. The shields given to the unhorsed soldiers are yellow, with their underside red. The hair, wherever visible, is red to brown in colour; the eyes are painted and their gaze tends to focus on their enemy. It would appear that the flesh of the naked bodies has been left unpainted, but it was probably varnished. Care has been taken over the distribution of colour so that balance and clarity were achieved. We may see this demonstrated on the hunting scene on one of the short sides of the sarcophagus, where the two Persian hunters to the right wear either red or yellow shoes. Also, the tunic, the undergarment and the hunters may be distinguished from one another because of their colours, and those worn by one man are offset by the array of shades worn by another. Yellow plays a prominent role, partly due to the desire to emulate gilded metal.

In this work, where the blend of form and colour strove towards naturalism, colour has retained one of its important functions: namely to differentiate and thus clarify the composition. Mixed colours are now prevalent; the violet, pink and brown shades complement the light and

dark blues and reds. Each hue was adroitly set against another as if to complete a four-colour map. Of course, here we have three-dimensional forms as well as at least seven different shades, but the idea of four-colour mapping was close to the Greek ideal, if not in practice at least in theory. Pliny remarks:

> Now that even purple clothes our walls and India contributes the ooze of her rivers and the blood of dragons and elephants [i.e. indigo and cinnabar vermilion] no famous picture is painted. We must believe that when the painter's equipment was less complete the results were in every respect better.[25]

Pliny referred to the four-colour tradition which had been known since the fifth century when Empedocles (*c*. 500 to *c*. 430 BC) first associated white, black, red and ochre yellow with the four elements: air, earth, fire and water. This very elementary colour concept changed over the centuries; apart from using also blue, the ancients also developed a vocabulary for mixed colours.

However, in reality, as we have already observed, polychromed full-sized sculptures show that the Greeks had distinct preferences for colour combinations: red and blue, blue and green or yellow. Black was sparingly used. Plato (427–348/7 BC) was the first to attribute to colour a specific aesthetic quality capable of expressing sensations such as delight or anger. His pupil Aristotle (384–322 BC) introduced another aspect to the Greek colour theory by working out the first colour scale, which he based on his theory of the rainbow.[26] There, he says that the rainbow has three colours, red, green and blue. Yellow, the fourth colour, was really an optical illusion which is seen between red and green.

One other aspect pertaining to colour with which the Greeks were concerned is brightness, to which need to be added hue and saturation. If we want to understand what colour was supposed to do for sculpture, let us turn to the scholar Harold Osborne.[27] He had studied the colour concepts of the ancient Greeks and explains as follows:

> Hue is that aspect of colour which is referred to a scale ranging through red, yellow, green, blue. (About 150 different hues are discernible to a person with normal discrimination. … It is generally agreed that there are four psychologically primary hues: blue, green, yellow and red.) Brightness is that aspect of colour which is referred to on a scale running from dim to light (sometimes called the black-grey-white scale or dark-light scale). Saturation is the aspect whereby the hue is distanced from an achromatic (black-grey-white) area of equal brightness. … Hue, saturation and brightness provide a unique system of co-ordinates in terms of which any colour experience can be pin-pointed.

In the same paper Osborne commented that the Greeks appear to have taken a somewhat childish delight in gaudy colour and to have been impressed mainly by brilliance – brilliance being understood as a factor of saturation combined with luminosity – while their attention to differences of hue was far less prominent than our own in their total sensibility to colour impressions.

This "childish delight in gaudy colour" was at its most intense during the Archaic period, when the standing maidens wore robes of saturated colours. By the time the late classical period was reached, this impression was modified; an extended palette eased the sharp contrast of the dark and light hues. The shades on the Alexander sarcophagus were less "showy", less "out of keeping", as the yellow, pink and purple took care of the red and blue which three centuries earlier dominated the decor of architectural and sculptural monuments.[28] Red, in particular, lent colour to form. It has luminosity; it stands out and it attracts. The Greeks employed red for its decorative as well as for its dramatic effect, but also to draw attention to this or that aspect.

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We must now return to the question: why did the ancients polychrome their sculptures? What was their intention? One scholar of Greek sculpture thought that there was little doubt that the intention of earlier artists was to imitate their living models as nearly as possible in colour as well as in form.[29] Although this may have been so, there is more to it – as we shall see.

Firstly, no intentions can be expressed unless the circumstances induced these, and, secondly, there must be a readiness to embrace any change thus proposed or initiated. Thirdly, the reasons for polychromy are finite but permutable and therefore affect even different outcomes which we recognise as stylistic characteristics.

Every sculptor is concerned with practical considerations. His desire to make the most of the least may have led him to making acrolithic sculpture. Combining two or more materials, such as wood and stone, always produces a colourful assemblage. Then there was a need to disguise blemishes; he began to apply stucco, usually all over the carved figure. Smoothed stucco, and even more so the white, crystalline marble, appear very harsh under the bright Mediterranean sun, blanking out the more subtle forms – particularly when seen from a distance. Toning down takes off the glare; applying saturated colours, such as red and blue, gives the forms their distinctness, particularly as the shades were kept sharply separate by means of incised lines. The dazzling sun rays not only

influence perception; they also tend to fade any colours – hence the Greeks applied Punic wax to them. The practice of ganosis helped to retain the brilliance of the red and other shades and generally preserved the surface from weathering. Indeed, on many marble carvings we can still make out the ghost-pattern of former colour applications.

The Greeks used colour in order to emphasise detail. A number of bronze casts of heroes clearly show the sculptor's intention to single out details that speak of healthy life: the red copper nipples and lips, the gleaming teeth and the inlaid eyes provide touches of colour, yet the effect is calculated. Those busts which have lost their inlays show plainly how much thought had been given to the colouring. The eyes are organs which give expression to the inner life, particularly the emotions.

Colour may be seen as a substitute for more costly items or materials. There are numerous references in ancient texts to the early convention of actually dressing cult figures and bedecking them with jewellery. But as the free-standing goddesses of the Archaic period show, they received a permanent dress in sculpted and painted form. Although earrings, crowns and belts were frequently made of other materials and attached, they were just as often simply painted on. That cost played a part may be assumed, for at one stage, during the Athenians' war with the Persians, the "luxury decree" made it unlawful to set up expensive monuments. But the intent to spend could go the other way; the chryselephantine sculptures made by Phidias were very costly, indeed they were regarded as an investment for the gold was removable. Again, the sculptor's intention was to achieve effect through polychromy and by combining the most costly and luxurious materials. Colour adds drama. The Greeks, who invented the stage, were fully aware of the dramatic effect colour gave to the sculptural scenes along a frieze or in pediments. Colour contrast or colour accent were to them additional means with which to orchestrate the composition in stone.

But was colour employed also to symbolise? With a restricted palette the few colour values were clearly greatly stretched in order to accommodate most of the natural shades that may be seen during the Archaic period. Although attributes were often painted red, or a colour distinction was made between the male and the female complexion, there is no ground to believe that the colours were in fact used symbolically. True, they were sometimes used abstractly on objects that normally do not have these colours; red eyes or blue beards appear therefore unrealistic. Ornament and colour pattern must not be mixed up with symbolism. On the other hand, the colour of garments may well have been used symbolically in ancient cultures. Red, for instance, was perceived as

having a deeper meaning. It was a covering that offered power and protection. When the colour range was extended into mixed or lighter colours, as notably during the Hellenistic period, more shades were available for emulating the real world. Yellow replaced bronze or gold or represented clothes dyed yellow.

The Greeks had many reasons for wanting to polychrome their sculptures; whatever particular reason strikes us as the most relevant in a given situation, the one constant among these variables is the intention to beautify. The aesthetic appeal is present in and throughout their creative efforts. They were striving for harmony, for balance, for the perfection of line, which permeates the work from its conception to its finish. The loss of polychromy is like taking off a costly garment designed to elevate its wearer.

Notes

[1] Gisela M.A. Richter, *AJA*, 48, 1944, p. 321.
[2] Gottfried Semper (1851), *On the Study of Polychromy and its Revival.*
[3] Penelope Dimitriou (1949), Greek Polychromy (1949), unpubl. thesis, cf. microfilm.
[4] Patrik Reuterswärd (1960), *Griechenland und Rom.*
[5] 5th century BC; see Pliny the Elder, *NH* XXXV, 133.
[6] Paul-Henri Nenot, "Delos, sanctuaire d'Apollon", p. 261; Victor la Loux, "Temple le Jupiter", p. 266; Benoit-Edouard Loviat, "Parthenon", p. 235, all in *Paris, Rome, Athene* (1983).
[7] See Denys Hayes (1992), *The Technique of Bronze Statuary*, p. 13.
[8] H.J. Rose (1989), *Handbook of Greek Mythology*.
[9] The anti-luxury decree was introduced by Kleisthenes (born around 570 BC) and centuries later referred to by Cicero (*De Legibus* II.26.64)
[10] P. Friedländer and H.B. Hoffheit. 1948. *Epigrammata: Greek Inscriptions in Verse from the Beginnings to the Persian Wars.* Berkeley / Los Angeles.
[11] Quaest. Rom. 287 D. See also Gisela M.A. Richter, "Polychromy in Greek Sculpture" publ. in *The Metropolitan Museum of Art Bulletin* (JSTOR digitized), pp. 233–240.
[12] A seventh-century BC gold pectoral ornament shows the variety of design; on each of its seven separate platelets a goddess in a richly embroidered dress is depicted.
[13] Hannelore Hägele, In the Eye of the Beholder (forthcoming publication).
[14] In 1838 Michael Faraday, after having examined the deteriorating surface of the Pentelic marble, reported to a commissioner for the National Gallery, Henry Milman, on how the sculptures were scrubbed clean. In 1857 a further thorough going-over was deemed necessary by Richard Westmacott, the superintendent appointed by the British Museum. This was done with various scrapers and chisels.

[15] See J.D. Jenkins and A.P. Middleton, "Paint on the Parthenon sculptures", in *Ann. Brit. School at Athens* 83 (1988), pp. 183–207; also C. Gratziu and A. Middleton, "Further research on surface treatments of architectural sculpture in London", in *Superfici dell' Architettura le Finiture. Atti del Convegno di Studi*, Bressanone 26–29 June 1990, pp. 217–224..
[16] See *Geographica*, Vol. VIII, 3.30.
[17] See Pliny, *NH* XXXIV, 140. Quoted and discussed in Jacob Isager, *Pliny on Art and Society* (Londin: Routledge 1991), p. 108.
[18] Plutarch, *De Pyth. orac.* 2 (mor.395B).
[19] See Pliny, *NH* XXXIV, 8), and also D.M. Jacobson and M.P. Weitzman, "What was Corinthian bronze?" in *AJA*, Vol. 96, no. 2, 1992.
[20] See P. Craddock and A. Giumlia-Mair, "Beauty is skin deep: evidence for the original appearance of classical statuary", in S. La Niece and P. Craddock, eds. (1993), *Metal Plating and Patination – Cultural, Technical and Historical Developments*, pp. 30–38.
[21] The two statues are known as warrior A and warrior B.
[22] See Peter Bol (1985), *Antike Bronzetechnik: Kunst und Handwerk antiker Erzbildner*, p. 151. Fitting these parts correctly into the hollows of the eyes requires skill and time. During a recent reconstruction of inlaid eyes it took a goldsmith one week to complete each eye.
[23] R.A. Higgins (1970), "The polychrome decoration of Greek terracotta", in *Studies in Conservation*, 15 (1970), pp. 272–277.
[24] See Ellen Macnamara (1990), *The Etruscans*.
[25] See Pliny the Elder, *NH* XXXII, 50; "quattuor coloribus solis inmortalia illa opera fecere – ex albis Melino, e silaciis Attico, ex rubris Sinopide Pontica, ex nigris atramento – Apelles, Aetion, Melanthius, Nicomachus, clarissimi pictores, cum tabulae eorum singulae oppidorum venirent opibus. Nunc et purpuris in parietes migrantibus et India conferente fluminum suorum limum, draconum elephantorumque saniem nulla nobilis pictura est. Omnia ergo meliora tunc fuere, cum minor copia. Ita est, quoniam, ut supra diximus, rerum, non animi pretiis excubatur."
[26] *Meteorologica*, II, 372–375.
[27] Harold Osborne (1968), "Colour concepts of the ancient Greek", in *BJA*, 8, pp. 269–283.
[28] A modern reconstruction of the polychromy tells otherwise when comparing it with the faded paint still visible on the sarcophagus with its more mellow look.
[29] See Ernest Arthur Gardner (1920), *Handbook of Greek Sculpture*, p. 28.

CHAPTER FOUR

ETRURIA AND ROME: CULTS COLOUR CODING

> Roman art was to a great extent the servant of Roman history and that its function above all was commemorative.[1]

Numerous excavations in the region between the rivers Arno and Tiber in Italy have brought to light works of art from the hands of an ancient civilisation whose development runs parallel to that in Greece. The Etruscans, the ancestors of the people of Tuscany, settled there after having reputedly left Lydia in Asia Minor during a time of economic hardship. Whether we believe Herodotus, who wrote his *Histories* during the fifth century BC, or give credence to a later account by Dionysios of Halikarnassos (*fl. c*. 20 BC), who thought of the Etruscans as a people coming from northern Greece, their art and craft appears to be indebted to both Greece and Asia Minor.

The Etruscans were skilled metal workers, ceramists and mural artists. Their terracottas and wall-paintings have an instant appeal because they are fundamentally colourful and exuberant, expressing a *joie de vivre* similar to what may be observed in the art of an older people, the Minoans, who flourished on the island of Crete, one of the stepping stones between Asia Minor and Greece.

A very fine example of the Etruscan's ability to absorb foreign artistic idioms is a silver panel from the second half of the sixth century BC which is still in the orientalising style. It is a section of a larger embossed metal panel showing two Amazons on horseback, with a third unseated on the ground trying to ward off the galloping riders. The metal worker was faithful to detail which he either engraved or applied separately. The metal applique was worked in electrum. The contrast of the two colours, gold and silver, holds in tension the released and the unspent energy. The golden untied hair, flexible harness, sashes and borders appear to flow over firmly modelled bodies with the colour of a knife's blade, suggesting thrust and a colourful melée although there is very little actual colouring beyond the created contrast.

The Etruscan terracottas, for all the ordinariness of the material, are no less expressive of life. Over the earthenware colour of the fired clay or the smooth slip that acts as an undercoat, paint marks of reds, ochres, black and blue add the finishing touches to the surfaces of figures and reliefs which themselves often act as the decorative finish to a larger architectural unit. The effect is, in the words of one scholar, "a symphony of modelling and colour".[2]

Metal and clay are the two main materials which offered an artistic outlet to the people who first inhabited the area north of Rome. For want of suitable stone, the Etruscan sculptor put his effort into modelling and casting, although he made use of nenfro, a volcanic material that has a coarse surface and was therefore plastered over and painted. Also, wood was used as a building material, particularly during the early phase of temple building. While at first wood may have been used for cladding and decorating, terracotta became the Etruscans' preferred material, with which they decorated their main buildings. It is more weather resistant and also an easy material for creating all manner of images. These were as a rule covered with a white slip and painted.

It is on the upper part of the temple or civic building that the Etruscans expended their creative and imaginative effort.

There were the reliefs in the pediments and the revetment plaques, the friezes, the antefixes and the acroteria which were placed loftily on the ridge of the roof. These were "exuberant, wildly colourful after-thoughts"[3] to protect and to enliven the building rather than to emphasise its various parts. as the Greeks would have done.

The antefixes were fastened along the verge of the roof. Their function was to protect the end grain of the rafters from weathering and to mask any junction of roof tiles. What served as a practical necessity turned into an attractive feature. These fixtures developed from painted flat tiles into more elaborate sculptural forms. The terracotta heads of satyrs, felines and maidens were taken from moulds and then painted. On numerous Greek stone temples however these antefixes were carved as lion heads which also served as rainwater spouts or sima; they too were finished in colour.

A well-preserved painted terracotta antefix from the ancient settlement of Caere (Cerveteri) is now in the British Museum. This late sixth-century BC tile-end comes from a mould showing the face of a female. The painted finish in red, black, blue and white or cream was applied by a sure hand that followed the contours of the brow, eyelids, lips, waves of hair and diadem without hesitation. The face has one blue and one slightly damaged brown eye. The startling blue of the left eye corresponds with the bright paint of the diadem. Her brown eye gives her a more mellow look.

One may wonder why the face came to have two differently coloured eyes. Was the painter careless while painting dozens of these moulded tile-ends that were needed for a large building? The intention surely must have been to produce a uniform appearance. Still, Etruscan art appears easy and fluent; there is nothing rigid in its conception or execution.

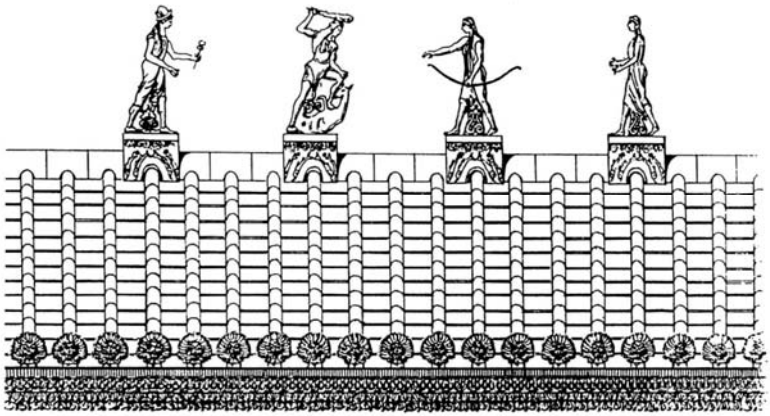

Fig. 4–1 Drawing of an Etruscan roof with four roof figures, revement plaques and antefixes.

Man-sized figures or acroteria, representing apotropaic powers, were placed on the ridge and corners of the roof, with the sky as their backdrop. These mythological representations were often shown in action, like those from the temple of Minerva of Portonaccio in Veii. A striding figure of Apollo, which belonged to a late sixth-century terracotta group, *Apollo and Herakles Fighting over the Kentish Hind*, now in the Villa Giulia in Rome, still has enough colouring for impressing on the viewer its outgoing power. The contrast created between the red-brown face and body colour and the cream-coloured pleated garment with its flying blue borders adds yet another dimension to the opened-up figure. The dark contours of head and limbs were set against the light blue of the sky, making the figure visible from afar.

Another group of terracotta figures, made between 530 and 510 BC, may have come from the pediment of a temple in Cerveteri. Their scale suggests that they once decorated a comparatively small building, perhaps no larger than a one-storey edifice. The figures, all warriors, are between 200 and 610 mm. They still show a fair amount of painted pattern on their

armour and the details on their faces. In fact, the patterns of small squares or rhomboids with dots in the centres imply that the figures were intended to be seen from close range rather than from a distance; the size of the figures seems modest and their painted detail is minute. If however they adorned a large building, then the artist must have painted the figures on the ground true to what he knew rather than to what could be seen when in position. Their modelling too is fairly detailed: the bearded warriors all wear a short chiton and armour, helmet and greaves. Their spears and shields are now lost. The similarity of their heads makes a mould the likeliest method of fabrication.[5]

The colours employed are reddish-brown for the skin and black for the rims of the almond-shaped eyes; the irises are red. All the warriors have a beard which is either black or maroon, whereas their hair is of a reddish shade. The helmets are yellow. The only surviving helmet decoration is painted in red and black stripes. The armour shows different patterns in yellow, red or black; the belts have black rhombic or square patterns with rosettes in each centre. Some wear greaves which are yellow with a design, while others have black leggings. The choice of yellow here is probably in imitation of bronze or brass.

Removed from their original setting and placed in custody in different museums, they still appeal to our visual sense and imagination. The Etruscologist M.-F. Briquet thought the Etruscan architectural decor artistically effective because "its contrasts of colour, alternation of violent and peaceful scenes, and figures whose countenances, at times serene, at times wildly grimacing, serve to excite the emotions and perhaps to satisfy the religious feelings of the faithful". She observed the same contrastive element in Etruscan cult figures and, recalling the Apollo from Veii, commented "The bright colouring of the Archaic period, the light ivory colour of the fabric against the sombre vigour of the reddish-brown face and flesh accentuates the impression of a dark implacable force, an irresistible power."[6]

Another sculptural type which is undeniably Etruscan in its conception and effect is exemplified by a polychrome terracotta sarcophagus from the first half of the second century BC. The brightly coloured repository of the remains of and memorial to Larthia Scianti originated in Chiusi (Poggio Cantarello). While her sarcophagus is still in Italy (Florence), two very similar ones, which were made for other members of the Scianti family, are now in London and in Berlin.[7] On one of these oblong boxes, which resembles a coach, a matronly woman reclines. Her left elbow supports her body, while with her right arm she pulls her veil over her head. She is dressed in finery and wears her jewellery. In her left hand she holds a

silver cased mirror. The coffin, or cist, is decorated in relief with large rosettes between pilasters of the same height.

Although the colours with which the sarcophagus has been painted have now faded, they still make a strong impression for they dispel any thought of death and decay. Her fair complexion and the silky look of her cream-coloured garments contrast with the strong tints given to details. Her dress has purple and yellow borders and a green hemline. She wears around her waist a richly embroidered belt which is tied below her breasts. The tied endings of the belt hang down and let the golden colour flow into her lap. The various rings on her ears, arms and fingers – together with her ornate brooch and tiara – still have yellow for gold. The brown of her hair, eyes and eyebrows is the darkest shade and arrests the viewer's attention. The mirror casing is light blue and simulates silver. Any red or pink pigment seems to be missing. The decoration on the stone box received a finish in the same range of colours. The figure has the air of a well-placed, mature woman conscious of her social position.

On another painted terracotta cinerary box with a reclining figure representing a young man, the colour scheme is particularly interesting as two traditions have come together.[8] The lid with the effigy is in pastel-like shades of mauve, yellow-orange, brown and light blue, whereas the coffin recalls the blue and red distribution and black and ochre contrast of the period of Archaic Greek.

The actual paintings on the walls in tombs or on the Amazon sarcophagus from Tarquinia should be viewed to appreciate the colour perception and artistic application of the Etruscans. The sarcophagus dates back to the first half of the fourth century BC and depicts scenes of high-spirited women in battle with warriors. On the smooth marble surfaces are pinks and light blues, reddish-brown, ivory hues, greys and ochres blended together into harmonious compositions which, despite the cruel subject matter, aesthetically satisfy. From a century earlier (about 480 BC) the *Tomba del Triclinio* (situated within the Necropoli dei Monterozzi at Tarquinia) presents a delightful and liberated scenario that would awaken joy in the saddest of mourners. Although the palette is restricted to four basic colours, the overall effect is that of contrast between the reddish-brown and the sandy colours. The subject matter is cheerful and the design fluid. Music-making and dancing, watching and conversing, are the events painted on the middle zone of the walls; the rest of the wall and ceiling space is filled with patterns that continue the colour scheme.

The *Tomba dei Leoparda* within the same burial complex presents an equally delightful decor but with an emphasis on the colour combination of red, blue and green, in which scenes of merry-making in a garden have

been depicted. The two tombs were painted within a decade or so from each other during the early part of the fifth century. Etruria was the homeland of the Etruscans, but their political and economic interests took them to Rome and beyond – and as far as Campania and the lower Po valley, where they had established colonial settlements during the course of the sixth century BC. None of these power bases lasted, for Rome gained the upper hand. After centuries of warfaring and an uneasy truce between the people of Etruria and Rome, Rome granted citizenship to the Etruscans (91–89 BC). Etruscan art became part of Rome's cultural inheritance, although the eyes of the Etruscans were trained on objects from further afield.

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Plutarch tells us that Numa Pompilius, the second ruler of Rome, forbade the setting up of any images, and that therefore the Romans worshipped their gods for more than 170 years without cult statues or paintings. Pliny the Elder, filling in his readership on historic events as well as on legends, mentions that the art of statuary in bronze was known during the reign of King Numa.[9] In another section he referred to Varro,[10] according to whom the Etruscan sculptor Vulca was summoned from Veii by Tarquinius Priscus, king of Rome, who awarded him the contract to make the image of Jupiter which was to be dedicated on the Capitoline. This image, writes Pliny, was

> of terracotta, for which reason, as is usual, it was coloured red; that there were terracotta quadrigas on the peak of the temple and that the Hercules ... was also done by this artist. For these were the most praiseworthy images of deities of that era; nor do we feel satisfied with those [earlier] men who worshipped such images; for it was not their habit to make gold and silver images, not even for gods. Images of this sort have survived in many places today; they survive, in fact, even on a great many roofs of temples in Rome and in municipal towns. They are images that are to be marvelled at for their surface detail and artistry and for their stolidity, more revered than gold, and certainly more innocent.[11]

Servius Tullius, another early author, commented on the word *minium* (vermilion, red) and said that red is associated with Jupiter: "Those who celebrate triumphs and have all the insignias of Jupiter (the sceptre, palm-branch, tunic) also colour the face with red." Pliny stated that they repainted red for holidays, which suggests that the red colour had some cultic significance.[12]

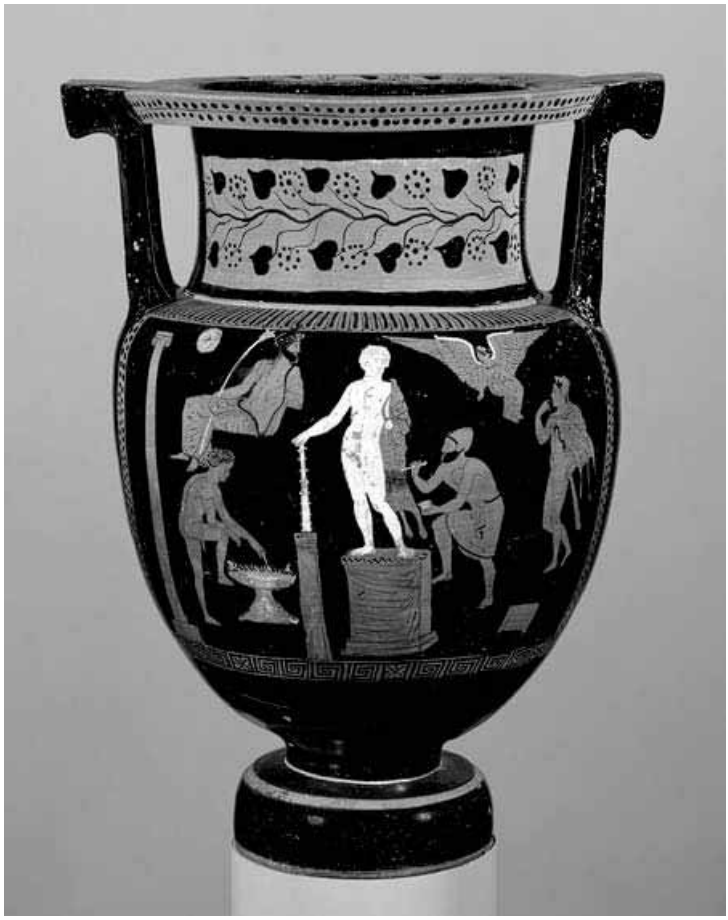

Fig. 4–2 Artist painting a marble statue of Herakles. Terracotta column krater (bowl for mixing wine and water), red-figure Apulian. Late classical; *c.* 350–320 BC; h. 51.5 cm. Attributed to the Group of Boston, 00.348. In *Heilbrunn Timeline of Art History*. New York: The Metropolitan Museum of Art, 2000–. http://www.metmuseum.org/toah/works-of-art/50.11.4 (November 2010) © Metropolitan Museum of Art, Rogers Fund, 1950.

Turning now to the question of polychromy in Roman sculpture opens up several new themes. The people of Latinum were of a different artistic temperament, with different opportunities to develop their own idiom and make their specific contribution to art. Perhaps even more than the Etruscans, they were open to outside influences, notably to what Cornelius

C. Vermeule called "overexposure to Greek artistic showmanship".[13] However, what emerged as Roman sculpture did so because of their need to express sentiments and ideologies essentially Roman. Portraiture and commemorative art, sarcophagi and public monuments, all gave Roman art its characteristic idiom: an eye and feel for detail that led to naturalism and narrative. Unfortunately, the Romans' strong preference for anything Greek has for a long time masked their true contribution and intentions within the domain of sculpture. At first, under the artistic influence of the Etruscans, which continued down into the third century, Rome also came into contact with Greek culture while expanding to the east. Even at Campania, a former colony of the Etruscans, the Romans would have been aware of the strong links with Greece.[14]

During their forays into southern Italy, Sicily, Greece and Asia Minor, the Romans saw and took many portable works of art and brought them back to Rome. They also gained access to marble quarries; they amassed precious metals; and, not least, they had contact with Greek artists and craftsmen who would soon work for them. By the first century BC Rome had become the hub of an ever expanding empire. Trade flourished, no less so in art objects, which filled public buildings and villas.

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Nothing could be more Roman than their commemorative art. Whether through portrait or narrative relief, private and public attitudes were reflected, personal and national characteristics highlighted, and achievements and aspirations openly declared.

The portrait, which can be the most personal and also the most public statement, gave the Roman citizen his identity. Through it his ancestral ties were acknowledged and his political standing acclaimed. However, a deep-rooted desire to preserve the memory of a loved and valued member of the family permeates the development of the art of portraiture. The mask taken from the dead person served the purpose of retaining an image which was, in the first instance, used as an object of display. Its undeniable resemblance, stark in its realistic effect, became a trait of the portrait proper, to which the wax or plaster mask stood proxy. Of course, an important citizen may have had portraits of him made in his honour during his life-time.

Although ancient literary sources rarely state specifically whether or why the different types of portraits were coloured, we can glean from various passages that colour played a certain role. Often it is the context that provides an insight rather than a stated, or omitted, fact. Pliny, who

intersperses throughout his *Natural Histories* his comments on art, mentions "painted portrait" in a context in which he referred to sculpted rather than painted images:

> But conditions were different in the atria of our ancestors where it was portraits which were looked at, and not statues by foreign artists, either in bronze or marble. Wax impressions of the face were set out on separate chests, so that they might serve as the portraits which were carried in family funeral processions, and thus, when any one died, the entire roll of his ancestors, all whoever existed, was present. Genealogical lines of descent, in fact, used to be indicated, running back and forth between painted [i.e. coloured] portraits.[15]

These wax impressions would have looked as dead as the dead themselves from whom they were taken, had no pigments been added to the stuff or the models not been finished in colour in imitation of living persons. According to Roman custom, they were carried in funerary procession and displayed as part of the ancestor worship. Polybius,[16] who lived during the second century BC, the period to which the above passage alludes, wrote as follows:

> The portrait [of a prominent Roman who has died] is a mask which is wrought with the utmost attention being paid to preserving a likeness in regard to both its shape and its contour. Displaying these portraits at public sacrifices, they honour them in a spirit of emulation …[17]

A present-day historian put it this way: "The image is a mask which regarding its form as well as its painting [*sic*] is worked to bring out the similarity."[18]

Seen from a modern perspective the relationship between the death mask and the ancestral portrait was vitally important to the development of portraiture. It began during the early Republican era but had served its purpose by the second century AD, when, according to the older Pliny, such ancestral masks became fewer and fewer. Paint or make-up was used in order to produce a more convincing, life-like image. The aim was to impress, which the doll-like figure truly did, for it was clothed in the robes of the deceased person and also wore his mask.

A wax impression or plaster cast does not however fulfil the criteria for an art object. The mechanical transfer of a person's countenance, however true of a particular moment in that person's life, lacks the artistic intention that would bring an understanding to the subject. The artist, on the other hand, produces an interpretation or summative statement relating to a person's physical characteristics and character; or he aims at conveying an

impression by modifying less favourable traits.[19]

Roman portraiture shows the man behind the mask. It offers an astute perception of the age that brought forth conquerors and administrators, rulers, citizens and freemen who were entitled to have their own image displayed, proudly and perhaps lavishly executed. Such images were often a gift of honour to the man of distinguished lineage, to the military or civic leader. During the first century BC there was a proliferation of portraits and public portrait statues. Many of these were destroyed during the political cleansing of 65 BC. Pliny once again puts into context and explains a social trend when he writes:

> Nor must we pass over a rather new invention, that of setting up portraits in libraries, if not of gold or silver at least in bronze, of those immortal spirits who speak to us in these places; in fact, even portraits of those whose looks were never modelled are made, and our sense of longing give birth to faces which have not been recorded, as happens to be the case with Homer …[20]

The material for such images came largely from the spoils of conquered countries. Gold, silver or bronze objects were melted down and invested in new casts. But marble and other valuable stones were also increasingly used as they were made available from newly opened-up or foreign quarries.

The appeal of silver, and particularly of gold, the most prestigious of all metals, lay of course in their value. But gold also had an aura which was believed to belong to the gods, and therefore a golden image of a mortal showed him in an elevated, god-like state. The Emperor Augustus would not allow himself to be represented in an image made of gold, but Domitian, a first century AD emperor, had statues set up in his honour which were of gold and silver and of a certified weight.[21] The Emperor Caligula (Gaius)[22] even had a temple erected wherein he placed his own golden image to which priests attended; the statue had daily to be dressed in similar clothes to those worn by the emperor.[23] Inlaid eyes in bronze portraits were a classical feature which continued into the Hellenistic period, when eyes were made to be part of the cast and received no more than a surface application of gold or paint. On some extant Roman marble portraits there are sufficient amounts of colour left for the portrait to be perceived as intended, as for instance on the head of the young Caligula in Copenhagen.[24] P. Reuterswärd commented on its "unusual subtle painting". The cleverly drawn black eyelashes and the brown-yellow and black colouring of the (left) eye imitate the gentle expression of a living person. But it was under the Antonines during the second century AD that

Roman sculptors finally gave the eyes of portraits direction and colour without colouring them.[25]

But we must first turn to an earlier portrait statue which is the very embodiment of the Augustian period, and was found north of Rome, near Prima Porta, during excavations in 1863. It shows a youthful looking Emperor Augustus in full armour, barefooted and with his right arm raised. Next to his standing leg, and serving it as a support, is a cupid on a dolphin. Carved shortly after AD 17, this marble statue portrays the emperor wearing a splendidly decorated cuirass with scenes in relief from his campaign against the Persians (20–17 BC) to win back the Roman standard. When unearthed the statue still showed many traces of colour.

It is thought that it represents an incomplete copy of a more luxurious gold or silver statue. If so, it is surprising that as a copy it was not gilded but instead was polychromed. The white marble served as a background for the raised and painted allusion to an event upon the larger image. Thus, the idea of a scene within a scene seems to hark back to a tradition of the *toga picta* type of paintings as found on a representation of a Roman Triumvirate in the *Tomba Francois Vulci* at the Necropoli di Ponte Rotto. Or rather, the relief on the cuirass exemplifies the "phenomena of retrospection" peculiar to Roman times.[26]

The colours applied are within the yellow–red–blue range and may represent material values such as the reddish-brown for leather, blue for the metal of harnesses, sky-blue for clouds, yellow for the flame of a torch and red for hair, beard and cloak. However, the yellow and pink may symbolise the divine origin of an Apollo or an Aurora. Combinations of blue–red–yellow or blue alternating with yellow were chosen for the standard and the wings of a goddess. Green, purple and black, normally part of the Hellenistic palette, are missing.[27] On the marble statue of Marcus Holconius Rufus, which was based on this prototypical figure of the cuirassed emperor, traces of paint were also found. As for the stance of the imperial statue it, in turn, owes much to the Greek ideal of Achilles as represented in the *Doryphoros* figure and painted chiefly in red and gold.[28]

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The use of white marble and stylistic references to Greek statuary are two important developments in Roman sculpture to which we must give some space before continuing with the theme of commemorative sculpture. It was under Emperor Augustus that the Carrara marble quarries were opened up on a large scale. From then on, Roman sculptors had easier access to white marble. Also, from an ever expanding empire imported coloured stone reached Rome, much of it used on public

buildings, although certain types of sculpture were also executed in coloured stone. However, as far as Roman copies of Greek statuary are concerned, white marble was used.

The Romans' taste for Greek sculpture had its nurturing ground in the Greek colonies of southern Italy and Sicily. After the subjugation of Greece (146 BC) during the early empire shiploads of Greek treasures, the spoils of war, began to reach their own shores. But rightfully acquired works of art, sought out by later agents for their rich clients (of whom Cicero was one), also were sent to Rome. Untold numbers of copies made from Greek originals filled the niches in Roman villas and decorated public buildings and places. Greek sculptors often continued to work for their new overlords in the style of their own native classical (and Hellenistic) idiom.

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Many of the marble copies that have survived the passage of time were based on bronze originals which are now largely lost. As copying from one medium into another goes, sometimes they were adapted to suit the material and technique, and at other times they were remodelled. For instance, to avoid breakage interstices had to be added between spaces. Eyelashes, formerly made of sheet metal, were now painted on and inlaid eyes were painted in or left blank until a new mode of translating gaze and colour was developed. The sculptor then relied entirely on his chisel for creating a "coloristic" effect where expected through the contrast of light and shade.

Visually, the main difference between bronze and marble is their colour. However, no attempt was made to copy the metallic appearance of the original bronzes. In fact, there is no indication that the Romans had bronze paints available. What did the copyists make of the painted Greek statue? One scholar who examined the problem of Roman copies of Greek statuary dismissed this question by claiming that "polychrome statues could not be copied at all".[29] This is a rather unsatisfactory answer which simply raises more questions.

Had the copyist a problem in isolating the form from the coloured overlay? May it have been a matter of avoiding expense by omitting statues with much colouring on them? Or was it more a question of taste? Were monochrome figures the answer to a polychrome setting, thus providing the ever sought after contrastive effect?

As we have already seen, the Romans were by no means averse to colour – on the contrary. Nevertheless, a gradual shift occurred, moving

away from applying paints to choosing materials which had intrinsic colour values. By polishing or texturing the surface or by combining different materials, the image now emanated its own hues. Where devoid even of chromatic shades, surface modelling with light and shade could offer a coloristic effect that satisfied the desire to see true colour. Still, the fact remains: paint was applied to Roman commemorative statues.

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On the emblazoned front of the first-century AD statue of Emperor Augustus a personal and national victory is being commemorated. A century later the triumph over the Dacians is celebrated in an even more ostentatious manner. Trajan's Column (erected in AD 113) shows a continuous narrative relief which tells of how in AD 105–06 Dacia (modern Romania) became annexed and part of the Roman Empire.

The densely crowded scenes of foot soldiers and horsemen, boats and tents, fighting and marching men, lead the eye upwards, band by band, to the very top of the column, on which stood a golden statue of the emperor. Most of the carving is in high relief, with much undercutting. Until fairly recent times the accumulated grime on the monument prevented the onlooker from seeing any colouring on the carvings and so it seemed that polychromy was out of the question.[29] In any case, what possibilities were open to the sculptors for polychroming such a complex piece of sculpture that would add to rather than distract from any visual cohesion?

The profusion of detail, the seemingly casual groupings and directional thrusts of men and equipment, the endless scenes that repeatedly show the same actors but in different locations and circumstances – all this presents itself to the viewer as he tries to read the story, relating one scene to the next. The spiralling bands of pictures do not lend themselves to a symmetrical distribution of colour as is found in the framed Greek reliefs of the Archaic and classical periods. Nor does it encourage a method of colouring as seen on Augustus's cuirass. Apart from the cost of colour and labour, it would not have added anything that assisted the readability of the narrative. Still, on a very selective basis, a likely proposition would have been the singling out in each scene of the main protagonists, and help with focusing on the flow of actions that the narration carried forwards. Such a scheme – where possibly the Roman general might have been shown in red and gold and his Dacian counterpart in another pair of shades against the white background – would have retained the cohesion of this complex Trajanic frieze.[30]

When Trajan's Column was examined during conservation work in the 1980s, some colouring matter was in fact noted. The origin of the layer of pinkish-brown was a patina known as *scialbatura* which is not any pigment. This type of patina is the result of "a natural chemical process due to the colonisation of the column's surface by both epilythic and endolythic crustose lichens". Marco del Monte, who investigated the surface appearance of the column, stated that the colour is not the remains of an original polychromy, or a protective treatment applied to the column, or a chemical product formed by the oxidation of a proteic substance applied as a protective agent during the making of casts.[32] In 2008 researchers decided to "paint" the column by projecting onto its carved surface coloured light beams, thus letting it appear as if the scenes had been polychromed, without touching the carvings themselves.[33]

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Trajan's Column and other monuments, particularly the triumphal arches, not only celebrated important events; they were set up as propaganda proclaiming imperial power over subject nations. A celebration usually calls for colour. *In natura* the triumphal procession would have made sure of that. For instance, the reliefs on the Arch of Septimius Severus have reminded the passers-by of the showy display of these processions. The quadrigas and equestrians, ahead of the troops, then followed by wagons laden with spoils and not least by a train of captives of foreign appearance and in outlandish garbs – all this must have been spectacular to look at.[34]

To the discerning Roman eye yet another type of sculpture spoke the language of propaganda candidly: the figures of barbarians, subjected to witness to the disempowerment of their peoples. The submissive pose, usually kneeling or weight bearing, as much as the colour of their native dress, made them stand out as apart from a culture that claimed superiority. Sculptors modelled their statues on Rome's enemies – the Persians, the Medes, the Phrygians, the Dacians – and faithfully rendered their perceived foreignness in coloured stone. Their intention was to present eye-catching, startlingly realistic images with the material at their disposal, carefully selected for its purpose. Symbolically a further blow was dealt to the conquered nation by using their own most valuable stone, out of which images of the now subservient captives were hewn.

Beside these propaganda images other polylithic types were created which served a different purpose. Figures of Africans and copies of Greek goddesses, animals and busts became part of the decorative programme of luxurious villas. Colour contrast within the piece of sculpture as much as

an agreement of colour with the rendered subject yielded the desired effect of surprise.

L.M. Anderson, one of the authors contributing to an exhibition catalogue, *Sculptures in Coloured Marble*, referred to the brilliant panorama of coloured marble sculpture, saying:

> the decorative possibilities of coloured marble were fully understood by Roman sculptors, who availed themselves of the whole spectrum of chromatic possibilities, occasionally matching subject with stone, but more often than not simply revelling in the beautiful patterns born of the chance combination of natural elements over time.[35]

Preparing the ground for this fondness of polychrome materials were the monuments in white marble which were routinely adorned with rich colour throughout antiquity. This is by now well attested through the work done by conservators who uncovered under the layers of grime traces of colour which was applied to the white marble of Greek art and architecture from the sixth century BC onwards. This led architects and sculptors of the late Hellenistic period to search for building and ornamental materials which had inherent colour.[36] When looking for the origin of the taste for coloured marble we have, according to Anderson, not to look to Italy itself, but especially to Greece in the east and North Africa, where Phrygian and Numidian marble were quarried. Yet the influence of Egypt was "paramount in the actual dissemination of exotic marble. Its entry into the orbit of Rome led to adoption on a wide scale of materials and traditions which had previously been unknown to Roman sculptors."[37]

Importation of white and coloured marble to Italy began during the second century BC, the period when polylithic statues of barbarians became popular. Indeed, colossal statues of Dacians made of green porphyry from the Peloponnese were set up in the Trajan Forum.

The ancient geographer Strabo,[38] of whom a statue in white and polychrome material exists, observed that the growth of the trade in coloured marble around the time of the Emperor Augustus led to receding prices for white marble. The opening up of the quarries at Carrara may well have affected the price level, too. Coloured stone remained exorbitantly expensive throughout antiquity. Under the Diocletian price edict of AD 301, the Phrygian and Numidian marbles were fixed at four times the price of marble from Skyros or Lesbos, 40 and 50 denarii respectively, while the most expensive stone was the green porphyry of Laodicea, costing five times as much.

Phrygian marble, also known under the name of *pavonazzo* or *pavonazzetto*, was the most important and valuable coloured stone used in

imperial and Byzantine art. However, Numidean marble, or *giallo antico*, was equally popular as it closely resembles Phrygian marble, from which it differs in respect of its base colour. A net of deep red to dark violet veins passes through the yellow-golden material and gives the stone its fiery and intensely radiant coloration.[39]

The statue of a satyr in *rosso antico*, created for Hadrian's villa at the beginning of the second century AD, is one of the most accomplished works within this category. In the Capitoline Museums, where it gives the name to its new setting, the Stanza del Fauno, is also a pair of centaurs from the same villa. They, too, are among the greatest works from antiquity on which the internationalism of Roman art was founded. Carved in *bigio morato*, a black polishable stone, they were signed by two sculptors, Aristeas and Papias, who came from Aphrodisias in Asia Minor, a centre of artistic excellence.

We need only look at the polylithic statues of a series of praying women, or orants, to realise with what finesse the differently coloured stones were used in order to evoke elegance or appropriateness. Such a figure is held in the Louvre and clearly demonstrates how the highly polished black stone emulates the silken material of dress and stole. For the head, hands and feet, white marble has been chosen, suggesting the colour of the skin. Here, and with any other polylithic sculpture, there is an affinity between colour realism and the subject represented, an important criterion in the choice of the coloured stone.

The wall-paintings of the Casa del Cripto portico in Pompeii (from the advanced second style) show rows of monumental busts in a garden setting. In each case a plain four-sided shaft continues into the actual image, which may be a bust or an armless head and trunk. These herms are depicted as of coloured material, yellow and red respectively, which would suggest *giallo* and *rosso antico*. As a popular image, this kind of bust was entitled to colour. It usually stood in the open by the roadside, flanked gates or doors, decorated places or commemorated events. Its earliest types, still in the Greek tradition of wood or stone, or as acroliths, were painted, probably to make them look more attractive. Wreaths and ribbons would give the herms a more festive look.

The polylithic herm became a widely accepted type from at least the early empire onwards, and it was adapted to a widening range of subject matter – divinities, barbarians and portraits of statesmen and philosophers. At Herculaneum columned busts of Heracles were found, with the head and body carved down to the waist line, and ending as shafts. The marbles used were the dark purple and patchy *pavonazzo* and the yellow Africano from Chemtou.[40]

Polylithic images had no need of paint. However, when the occasion required it the painted columned bust was preferred. The twelve-shafted busts placed at the six Carceres gates of the Roman Circus Maximus were painted in the colours of the Circus parties and were even draped with palaestrian cloaks during the competitions. Clearly, the herms became a functional object serving the colour and its adopted ideology.[41]

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Polylithic sculpture invites a closer examination with regard to the sculptor's competence in handling his material and his ability to express his intentions.

Piecing together different materials in order to make them into one cohesive whole was an old and widespread practice. As we have seen in Chapter 1, the Sumerians made the most of every scrap of material, becoming very skilled in combining these. The Romans relied on dowelling and on a close fit rather than on bitumen for holding parts together. Dowelling begins with drilling holes into which molten lead can be poured. Mortise jointing was, of course, another method of attaching pieces to the main body. The other skill which coloured stone draws to our attention is that of polishing.

Both techniques, drilling and polishing, are relevant to Roman sculpture. The inherent hue of coloured stone is only fully revealed when the surface of the crystalline material is polished and light can be refracted. Areas which have not been polished appear dull. Different surface finishes, such as matt or polished, can be used in a complementary way in order to enhance the impression of a broadly chromatic finish. To a lesser degree this also applies to white marble since graded surface finishes will introduce different shades and modify the uniform whiteness.

The drill, more than any other tool, helped to change the concept of stone carving. It was used for two reasons: firstly, to make bore holes and undercuts in order to trap light, thus producing a light and dark contrast. Secondly, the drill effectively freed the plastic forms from their enveloping mass by using an easier and safer method than would be possible with the chisel alone. The relief gained in depth owing to heavy undercutting. The figures, now distinct physical entities, crowd the space more than ever before, giving the scene depicted a lively – indeed, a colourful – air without actually colouring it. Some art historians prefer to use the term "colorism" when describing the play of light and shade or referring to the illusionistic colouring created on the heavily recessed surfaces of white marble figures or reliefs. The Baltimore sarcophagus *Triumph of Dionysos*, which John Bryan Ward-Perkins assigned to the

imperial period (AD 190–210),[42] shows how the sculptor has "painted" a picture. The chiaroscuro effect creates an atmosphere imbued with life. It is by association rather than by means of perceiving chroma that we accept the presence of "colour". Only a close-up will open our eyes to the fact that the giraffe's patchy coat is so not because of the brush but because of the chisel or nose-drill and that the crinkly oak leaves are not actually yellow.

Fig. 4–3 Sarcophagus showing *The Triumph of Dionysos*, anonymous. Roman Empire, *c.* 190. Thasian marble. Walters Art Museum, Baltimore, USA, 2331 (2). Credit: Wikimedia Commons.

The half-completed right end of the *Triumph of Dionysos* sarcophagus demonstrates the method of drilling. It shows how the outline of the design was followed by drilling vertical holes, one next to another, to the required depth. The perforated line was then cut with a chisel, which also removed the material. Portraits of the Antonine period show another method of using the drill. The running drill carved channels into the marble, leaving ridges or curls. This suited the portrayal of different fashions of hairstyles and beards, and also with such extensive drilling a conspicuous contrast of texture and light and dark – which was much in vogue – was achieved.

That the drill also was suited to give expression to eyes was discovered at about the same time. Eye modelling during the Antonine and Hadrianic periods was taken to its ultimate conclusion. Although the irises were since Greek times often encircled before painting, with the drill the pupils, and through them the direction of the gaze, were permanently marked. At that stage shallow drilling with the nose-drill produced the desired effect.

Care was taken that the material for highlights remained standing. Also, there was a tendency to cast the irises in relief. During the Hadrianic period the workshops of stone carvers in Asia Minor favoured bore holes which would (due to the brightness of the sun) cast a deep shadow inside the holes. Again, light and shade replaced actual colouring. This was an essential step towards a coloristic yet non-chromatic finish for white marble sculpture.[43]

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The Romans' taste for colour in sculpture also becomes evident when examining their bronzes. The rich golden tone of the metal itself was often complemented by touches of colour through inlays, but also through paint applied to selected areas such as lips or the border of a dress.[44] Glass paste or shell gave eyes their bright appearance. A dark, almost black, colour was obtained through the technique of niello on gold, silver or bronze statuettes and artefacts. To create an attractive inlay pattern, a composite metallic black substance was applied to the prepared cavities and heat treated like enamel.

A bright and shiny finish for bronze work was preferred to its natural process of patinating. Either the tarnish was regularly removed from the surface of the casts by oiling it, a costly exercise, or the statue was made corrosion resistant from the start by applying a layer of gold leaf. Though partly functional, the gilding of statues during later Roman times seems to underscore the taste for brightness.

That gilding was intended right at the outset of producing the cast for the *Horses of San Marco* in Venice is revealed on analysis of the cast metal itself. Its alloy of copper and 1 per cent of tin suggested to the scientist that mercury gilding was applied, for this method was usually confined to high-purity copper alloys, the other method being fire gilding.[45]

Monuments, especially statues erected in honour of an emperor, were at times revered by the public like cult images. However, Augustus and later Tiberius discouraged any cultic displays. Claudius forbade that anyone should worship his image or sacrifice to him. Dio Cassius[46] writes as follows:

> At first he accepted only one portrait, and that merely of silver, and two statues, one of bronze and one of stone, which were voted to him. Expenses of this sort, he said, were futile and, in addition to that, they provided the city only with great loss and annoyance. In fact, the public buildings were so filled with statues and votives that he said he would give

some thought to the problem of what was to be done with them.[47]

The Roman Emperor Domitian (AD 81–96), whose statues were torn down and smashed after his death, misjudged his popularity. Suetonius recorded "He permitted no statues to be set up in his honour unless they were of gold and silver and were of a certified weight."

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The gilt and glitter may have been symptomatic of an empire which wanted to retain its own image untarnished. Later, under Constantine, who succeeded Diocletian the Tetrarch, a new vision was acted out. The firm gaze of the emperor fastened onto its goal, which the sculptor ably conveyed when carving his colossal statue.

In AD 315, in keeping with a thousand-year-old tradition, a triumphal arch, the Arch of Constantine, was erected. Carved panels which depict scenes from Constantine's campaign and his arrival in Rome decorate the edifice. They incorporate reused roundels from earlier imperial art that hark back to the successes of Trajan, Hadrian and Marcus Aurelius. Constantine thus acknowledged the empire's debt to his predecessors. In an inscription Constantine professes his own indebtedness for the victory over Maxentius. It says simply "by the inspiration of the divinity". In 313 Christianity had become the new religion of the state. In 330 Constantine laid the foundation of his new capital, Constantinople. The Eastern Roman Empire, which later was to become Byzantium, became a power in its own right.

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The art of sculpture entered a new phase. The circumstances were unfavourable; the followers of the new state religion abhorred idol worship and renounced image-making. Christianity eclipsed plastic art yet recognised the value of pictorial expression in communicating new religious concepts. Although public monuments continued to be created, private statues became a rarity.[48] Thus, neither sculpture in the round nor even high relief in stone was much practised.[49] Worse, what already existed frequently came under attack. The iconoclastic riot in Antioch (AD 387)[50] was one of many of its kind. The full impact of iconoclasm however was felt during the seventh and eight centuries.

During the period leading up to this mass destruction of works of art, some subtler shifts and changes were observable. While the iconographic developments are a subject of their own, it is worth noting a new interest

in small-scale art objects. The fourth and fifth centuries were especially rich in ivory work, but by the end of the sixth century this costly material became scarce.

Ivory diptychs were favoured gifts among high officials, and therefore beautifully embellished with decorative or illustrative designs cut in relief. These carved leaves were on the whole painted and gilded, although little of the colour remains visible. The east, mainly Syria, had a long tradition of ivory carving. Delicately painted, or studded with jewels and overlaid with gold, they were made into precious objects. They, like the richly carved cameos and seals, travelled well and helped spread new artistic ideas.

The technique of relief is related to yet another novel feature. The coloristic principle, to which we now turn, has little to do with colouring in the normal sense. The art historian Emerson H. Swift referred to colorism as "a sort of rich and elaborate patternization" and said that its purpose is not to produce the impression of solidly moulded and rounded forms, as Greek art had done, but rather to create a pleasing and colourful contrast of highlights and deep shadows, a glowing pattern of lighter and darker tones. In sculpture the introduction of the coloristic principle involved the gradual flattening and simplification of planes and a tendency to eliminate the dimension of depth in relief.

Another scholar of Byzantine art, O.M. Dalton, described the coloristic principle in similar terms:

> [the design] stood out light upon dark space, the result in either case being really a pattern of rhythmic alternation. The delicate play of light and shade at which fine modelling aims was sacrificed to mere contrast of colour: the effect was no longer sculptural but coloristic; the method was optical and independent of inference from touch. The contrast of black and white is so decided that the eye sees nothing beyond the contour of light masses on dark ground; though the position of the colours is reversed, it is the principle of the maker of silhouettes, of the damaskener, and the worker in intarsia …

The figures of Greek reliefs are often similarly arranged, without their planar background the relief loses its "scenic" or "narrative" cohesion. Another method of modelling in relief is what is sometimes termed "painterly" – a loaded term, but it draws our attention to the space in the background to which the modelled image relates. Indeed, what is going on in the forefront continues into the illusory space; there is no abrupt cutting off between any planar stages. What cannot be modelled is completed by drawing or painting it in. The background fully functions as a backdrop

that gives the illusion of space without resorting to the perspectival method. Even the shade given to the background may assist in relating the image to its pictorial space.

The reason for the descriptive term "painterly" being pressed into service becomes more obvious as it conveys the quality of modelling which, even without applied colour, creates the illusion of a painted scene. Greater skill in working out the subtle changes that occur between foreground and background, between one and another kind of texture, may produce an effect similar to a picture. In either medium an illusion of scenic space is being created and details are differentiated, either chromatically or through texture. In the relief spatial depth is indicated by engraving into the background. The term "painterly" alludes here to the different nuances of light and shade externally cast onto the image rather than to actual colour values.

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There is no doubt that much that was produced by the Roman art industry received no further colouring. The main reason may simply be that the private purchaser had to be content with copies or casts that were left uncoloured. Buying monochrome copies of Greek statues or unpainted metal or stone vessels decorated with reliefs may have become a matter of acquired taste, or of economy. White marble statues may have contrasted better against the background of coloured stone, and the elaborate carvings on sarcophagi may have satisfied as and for what they were. There need have been no aversion to polychromy, simply an acceptance that monochrome art objects have their own charm.

The importance of the art industry in antiquity has long been recognised.[51] During the Republican period flourishing workshops turned out copies of Campania panels with which religious as well as secular buildings were decorated. As time passed the workshops also supplied all the decorative and minor arts for villas in Rome. Whether stone craters or silver plates and cups, cameos, small-scale sculptures of household gods, votive figures in bronze or mosaics, they produced what was liked or thought desirable. What do any of these categories reveal about the Romans' taste for coloured sculpture?

The Campania terracotta reliefs were traditionally reproduced from moulds, covered with a white slip, then painted – including the background. From the Apollo-Palatinus temple a number of panels have survived which show traces of brown, violet, reddish-brown, pink, blue and white. Following on from the Etruscan custom of panelling the

exterior and sometimes also the interior of their temples, the Romans carried on the tradition into the first century BC. The public was therefore accustomed to seeing colour on their buildings. With the use of more and more coloured marble, polylithic façades and statues, the presence of colour continued to matter. Yet the white marble copies of Greek statuary and vases directed the viewer towards a greater appreciation of form and content. A gradual change in perceiving colour in relation to form began to affect Roman taste.

Fig. 4–4 Campana plaque of a frenzied satyr holding a thyrsus and a kantharos. Restored parts in coloured plaster, a neo-Attic production. Artist unknown. © Wikipedia public domain; photo: Jastrow (2007).

In this respect marble copies of wine-mixing vessels – craters – were quite important. Many of the reliefs on them are still in the classical or late Hellenistic style. The craters were based on Greek metal urns, such as were used for wine mixing at banquets or cult ceremonies. The imagery

used shows variants of Greek mythological and heroic subjects. Marble craters were mostly found in private Roman villas or gardens, although the earliest examples of marble craters decorated with relief were salvaged from the wreck of a ship which sunk near Mahdi in around 100 BC.[52] They were specifically produced for the Roman market by Attic workshops.

No mention of paint or gilt application is made in any of the archaeological reports and it may be assumed that, like most marble copies of Greek bronze statues, the craters were displayed without any additional colouring. Marble copies of Greek metal statuary were, as already noted, adapted to overcome certain technical problems and forestall possible breakage at vulnerable points. Still, certain features peculiar to metal working, or *toreutiques*, were translated from the first to the second medium. Thus the precise contours and the firm modelling peculiar to burnished metal set the standard for the carving and finishing of marble reliefs. The Borghese and Medici Craters and the Townley Vase are among the finest examples of such marble copies that have survived and allow us to judge for ourselves the impression they may have made on Roman taste.

The Borghese Crater (Louvre) was carved in Pentelic marble. It has a yellowish patina and dark veins. While the polish on the surface may be due to later cleansing or handling, the vine-leaf decor still shows crisp outlines. The flowing chiton of the maenad and Dionysos's mantle were worked with metallic precision, while the bodies were firmly modelled. The relief strongly recalls metalwork; it does not clamour for any additional colour beyond either bronze or marble. Neither does the Medici Crater, which was specifically made for the Roman market, or the Townley Vase suggest any real need for colour application, though the lustre of metal is missing when compared with any vessel of bronze or silver that may have served as a prototype to the marble cutter. Brightness and luminosity are fundamental to the Roman perception of colour, and so of course is contrast. This is best illustrated in such objects as the *Gemma Augustae* (Vienna) and the Portland Vase (BM, London), for there the intention was to let the two inherent features, contrast and luminosity, embrace a third: surprise.

Every great art object contains an element of surprise. Both the cameo and the vase involve, seen at a superficial level, only a dark and a light colour, which are responsible for the obvious contrast. But a closer look reveals the subtle gradations between these two extreme colour values. By layering the white and cream-coloured material until an almost transparent layer lets the darker substance underneath shine through, the two shades begin to blend optically, particularly in such detail as flying garments or

leaves. In this way some intermediary tones are introduced that bridge the space between the two extreme colour values and so lead the eye across from light to dark, through the pictorial depth, into the background.

Janus-like, Roman sculpture revealed itself to generations by exemplifying with works that which showed what they most wanted to see: polychrome or monochrome. Works like the often copied Laocoon group, *Clytie* (AD 40–60) and the *Westmacott Youth*, a second-century AD copy of a fifth-century BC Greek original, to mention just a few, have advocated monochromy as a truly Roman feature. This was believed not least because since the Renaissance that was the way Roman sculpture was seen. Bit by bit it was conceded that colour played a very important part; there was enough evidence, but also a need for a proper evaluation of the data. A full and most valuable study of polychromy in ancient Greece and Rome was presented by Reuterswärd in 1960. He raised an important question. Was the painting of sculpture at all times during antiquity understood as something necessary – that is, as an essentially characteristic feature of plastic art? This inevitably raises another question. What were the intentions for wanting colour in sculpture?

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As we have seen above, Roman sculptors initially draw their inspiration from two cultures: Etruscan and Greek. Both traditions made ample use of colour in sculpture. The art of the Etruscans was fresh and uncomplicated. Terracotta suited their temperament; colour was as deftly applied as their modelling was crafted, never too exact but with a feel for what seemed appropriate. Etruscan cult figures, architectural decoration and funeral art expressed and added to the drama and colour of life. The Greek sculptor was meticulous in his preparations; the colour patterns had to harmonise and balance. Before applying colour into an arranged pattern the underlying design for each colour area was marked out with a stylus. Overlays and inlays of precious materials were executed with great skill and forethought. In sentiment the Romans were close to the Greeks, whose art forms they admired and studied. Through booty and trade any amount of Greek artistic inventions reached Rome and with them also untold riches of precious metal that were recast into new forms. The trade in marble was the real foundation of their art. Copies of Greek statuary, sarcophagi, vases and other desirable artefacts were turned out in marble yards and workshops for rich Romans. These objects were largely left unpainted. However, it was polychrome stones that caught the imagination of the Romans and all kinds of polylithic creations gave permanent colour

to their environment, as did gilt, silver and bronze. For this reason they also invented the mosaics with which they covered their floors and brightened up their pools.

What appealed to the Roman eye most was luminosity and contrast. Within this scheme the colour white played its own part for it, more than any other shade, could provide the highlights for deep shadows and be used in creating coloristic effects. Pure white marble, if carved with all the possible variations from shallow relief to deep undercuts, can be as rich in nuances as a chromatic image. While no blemishes in the stone needed to be covered up, the carved design would subtly emerge from its white background or be seen against variegated plants or a polychrome façade. We may even wonder whether the Romans perceived it to be necessary to paint their sculpture.

There is no doubt about that; for the Romans colour in sculpture was a desirable means of expression. But there was less reliance on paint application and more on what could be achieved with the technical and material resources at their disposal. New carving techniques, materials such as white marble and coloured stones which were selected for their quality, polylithic statues and polished metal are all aspects which, whether overtly or obliquely, refer to the role of colour in reality. The inherent colour was preferred to the make-up, the applied paint. The Romans, by choice, turned to physical rather than to chemical colour. And although we perceive that as a shift towards monochrome, this was not yet a matter of relinquishing colour altogether – as during the Renaissance and Neoclassicism – but as an alternative for which there was room and which suited the general scheme. Sculptures were still painted and before long polychromy would once more enter into a relationship with the plastic arts, as seen before only in Egypt.

Notes

[1] J.J. Pollitt (Cambridge: CUP 1966), *The Art of Rome: c. 753 BC – AD 337. Sources and documents,* p. xiv.
[2] Cornelius Vermeule (Boston MA: Department of Classical Art, Museum of Fine Arts, 1979), *Roman Art: Early Republic to Late Empire*, p. 19.
[3] See Marie-Françoise Briquet, Chapter 4, p. 127, in *Etruscan Life and Afterlife: A handbook of Etruscan studies,* ed. Larissa Bonfante (Warminster: Aris & Phillips 1986).
[5] See Gilda Bartolini (München: Hirmer 1983), in *The Etruscans, their History, Art and Architecture*, eds. Maja Sprenger and Gilda Bartolini.
[6] Briquet (1986), p. 165.

[7] The modelled sarcophagi point to a departure from the earlier custom of cremating bodies and placing their ashes in terracotta cinerary urns with lids shaped like busts, which were painted or given a mask of precious metal. These seventh-century canopic urns bear some similarity to Egyptian canopic urns – their descriptive name alludes to Canopus, a town of ancient Egypt. A canopic jar is a vase used in Egypt, chiefly for holding the entrails of embalmed bodies.
[8] About 150–100 BC, from Chiusi (BM).
[9] Pliny, *NH* XXXIV, 33.
[10] Ibid., XXXV 157. C. Visellius Varro (or Marcus Terentius Varro, 116–27 BC?), Rome's greatest scholar and a satirist of stature.
[11] Pollitt (Cambridge: CUP 1992r), *The Art of Rome*, p. 8.
[12] Pliny, *NH* XXXIII, 111; see also
(http://gwydir.demon.co.uk/jo/minerals/pigments.htm):
"Vermillion, made from Cinnabar was used to paint the face of Jupiter's statue in Rome red, for sacred purpose."
[13] Vermeule (1979), p. 26.
[14] See Pollitt (1992), p. 58.
[15] Pliny, *NH* XXXV, pp. 6–7.
[16] *c.* 202–120 BC.
[17] Polybius, VI 53. Nor must we pass over a rather new invention, that of setting up portraits in libraries.
[18] See H. Drerup (1980), *DAI: RA* No. 87, p. 109. Drerup prefers the reading "make-up" to "painting". (Das Bild ist eine Maske, die sowohl hinsichtlich der Form als auch Bemalung auf Ähnlichkeit gearbeitet ist.)
[19] This whole idea has been challenged by modern sculptors who use the copy intentionally within a wider context. (See below, Chapter 11.)
[20] Pliny, *NH* XXXV, 9–11.
[21] See Pollitt, p. 165.
[22] Reigned 37– 41 AD.
[23] Thomas Pekáry (Berlin: Mann 1985), *Das Bildnis im Kaiserkult*, p. 118.
[24] See Ny Carlberg Glyptothek (637A) and P. Reuterswärd, *Studien zur Polychromie der Plastik: Griechenland und Rom* (Stockholm: Almquist & Wiksell 1958), p. 213.
[25] Donald Strong; prepared for press J.M.C. Toynbee, eds., *Roman Art* (Harmondsworth: Penguin 1976), p. 199.
[26] See Paul Zanker (Mainz: Philipp von Zabern 1974), *Klassizistische Statuen: Studien zur Veränderung des Kunstgeschmacks in der römischen Kaiserzeit.*
[27] See Heinz Kähler (Köln: DuMont Schauberg 1959), p. 15, where he gives a detailed description.
[28] Achilles as *Doryphoros* (spear bearer), Greek statue in bronze by Polykleitos (*c.* 450 – *c*. 444). A Roman copy is in marble.
[29] Margarete Bieber (New York: NYUP 1977), *Ancient Copies: Contributions to the history of Greek and Roman art*.
[30] Trajan's Column, erected in 113 AD, restored in 1588 and again in 1788.

[31] Marco del Monte, "Trajan's Column: lichen don't live here any more", in *Endeavour* (NS, Vol. 15, no. 2, 1991).
[32] See "Radiance in stone sculptures" in *Colored Marble from the Museo Nazionale Romano*, M.L. Anderson and L. Nista, eds. (Rome: De Luca edizioni d'arte 1989), p. 19.
[33] See the video clip: http://news.discovery.com/videos/archaeo-roman-column-painted-in-light.html
[34] See del Monte (1991).
[35] See Anderson and Nista (1989), p. 19.
[36] cf. Bryan Ward-Perkins (Rome: British School at Rome 1992), *Marble in Antiquity: Collected papers of J.B. Ward-Perkins,* p. 32.
[37] cf. Anderson and Nista (1989), p. 17.
[38] Strabo 9.5.16.
[39] See R.M. Schneider (Worms: Werner 1986), *Bunte Barbaren*. These were polylithic carvings in coloured marble.
[40] Hennig Wrede (Mainz: Philipp von Zabern 1986), p. 67.
[41] This type of cloak was worn by wrestlers and lion tamers. See Flavius Magnus Aurelius Cassiodorus Cassiodorus (*c*. 485 – *c.* 585), a Roman senator and writer, who refers to it in *Variae epistolae* (537).
[42] J. B. Ward-Perkins (1992), "Taste and technology: the Baltimore sarcophagi" in *Marble in Antiquity: Collected papers of J.B. Ward-Perkins* (Rome: British School at Rome).
[43] When black marble is treated in the same manner as white marble, resulting in a coloristic effect, there is no direct parallel. Despite the fact that lustre or highlights are what the shades are on white marble, the "colour reversal" is experienced differently. Perhaps our preconception of the dark material blocks any association with chromatic colours.
[44] cf. the cast statues of maidens on the font: Malibu.
[45] W.A. Oddy and Paul Craddock (1979), "Venice's horses are Roman not Greek" in *New Scientist* (6 September 1979), p. 713.
[46] Dio Cassius, LX, 5, 4–5.
[47] Pollitt (1966/1993), p. 139.
[48] Joseph Vogt, *The Decline of Rome: The metamorphosis of ancient civilization* (London: Weidenfeld & Nicholson 1967), p. 299.
[49] Cyril Mango (1963), "Antique statuary and the Byzantine beholder", *Dumbarton Oaks Papers,* no. 17, p. 71.
[50] Antioch on the Orontes, province of Syria Coele, modern Antakya (February AD 387), also known as the Riot of the Statues.
[51] cf. Alois Riegl (Rome: G. Bretschneider 1985), *Late Roman Art Industry.*
[52] cf. Dagmar Grassinger (Mainz: Philipp von Zabern 1981), *Römische Marmorkratere.*

CHAPTER FIVE

LATE ANTIQUITY TO EARLY MEDIEVAL: PIECING TOGETHER THE CULTURAL RELEVANCE

> In the realm of secular art, sculpture in the round was steadily losing ground and became pretty much limited to statues of emperors, magistrates, and popular charioteers. Preserved monuments are few in number, hence the importance of textual evidence.[1]

Mons Porphyrites in the eastern Egyptian desert was the source of the "most highly prized and difficult to work stones in antiquity".[2] From such a block were carved the four standing Tetrarchs (about 284–305 BC) erected in Constantinople (Istanbul).[3] The material was also chosen for two vast sarcophagi, one for Constanza, daughter of the Emperor Constantine; the other for Helena, his mother. Both were carved showing in relief a figurative design which earned them the admiration of later generations. Because of its distinctive purple colour the hard, fine-grained stone became known as imperial porphyry. Purple was the prerogative colour of Roman emperors; it symbolised worldly power. The state church of Byzantium, perceptive to the symbolic significance of colours, began to clothe herself in gold and purple. State and church thus appeared outwardly to be in unison.

Choosing a sculptural material for its colour is an option which largely depends on favourable external circumstances. The Romans' sovereignty over the eastern Egyptian desert placed porphyry into their hands. But it was commented:

> [it was not before the age of the Antonines that] the preference for costly and rare varieties of stone, without reference to their adaptability for sculpture, began to spread. After this epoch, the taste for porphyry and other such strongly marked or else intractable materials grew till it became a passion, and the Byzantine emperors carried on the tradition of its use inherited by them from former days of paganism.[4]

Another sculptural resource which became available to the Romans in considerable quantities was ivory. During the period discussed in this chapter ivory played an important role, although neither consistently nor solely during these eight centuries. Ivory objects helped to disseminate the new Christian iconography. Dentine and other precious materials embodied the new artistic and religious concepts, and it was the minor arts that kept alive the creative flow in an age which went through radical changes. This era saw enormous building programmes, which incorporated monumental sculpture in wood, stucco and stone. Those works of art that have survived the turbulent times between late antiquity and the Romanesque period let us see the Dark Ages as through a torn veil. Today we are left with objects of great beauty, precious materials and bright colours, the fragments of a culture which has yet to be fully assessed.

As we survey the geographical and historical setting from which these treasures have come, we also perceive a darker aspect. Iconoclasm had struck sculpture at its very root, depriving this branch of art of new shoots. The greatest loss in this respect was suffered in the Eastern Roman Empire, where the Byzantine Church was less than sympathetic towards cult statues of any kind for fear of encouraging idol worship.

Away from the turmoil of political and religious upheavals, scholars have since been able to reflect on colour usage, or ponder its symbolic significance. We too must give some thought to colour symbolism as we enter more fully into the culture of the early Middle Ages. In the hands of the skilled worker any material, whether precious or base, can be transformed into items of luxury. The notion of luxury relates closely to material values and skill, but also to time and effort, and not least to learning and the liberal arts

In AD 337 Emperor Constantine exempted ivory workers and other highly rated artisans from extra communal duties so that they might give themselves fully to the learning and practice of their crafts. This policy paid off handsomely, for over the following decades ivory workshops produced large quantities of high-quality objects. Indeed, the demand for ivory carvings was such that by 384 Emperor Theodosius I (347–395) issued the Decree of Luxury, with which he hoped to curb excessive production of luxury goods. These were mostly in the form of diptychs for it was the prevailing custom that any newly appointed consul, and other high-ranking office holders, should distribute diptychs as gifts of office. It has been estimated that during the course of the hundred consular years several thousand diptychs were produced,[5] which provided the obligatory gifts for esteemed persons in the two capitals, Rome and Constantinople. In celebration of the New Year diptychs were also widely distributed among

highly placed people. The ivory objects were often elaborately carved, then finished with paint or gold leaf and precious stones, according to taste and wealth.[6] During the fourth, fifth and sixth centuries workshops at Rome, Milan and Constantinople made from this costly commodity not only diptychs, pyxes, lipsanotheka and other small-scale objects, but also carvings for furniture. The dentine material of the elephant, walrus, narwhal or mammoth is a natural product and can be worked and treated much the same as wood. The high-quality ivory of elephant tusks is dense and white, but ivory that has greatly aged or is of inferior quality tends to look yellowish.

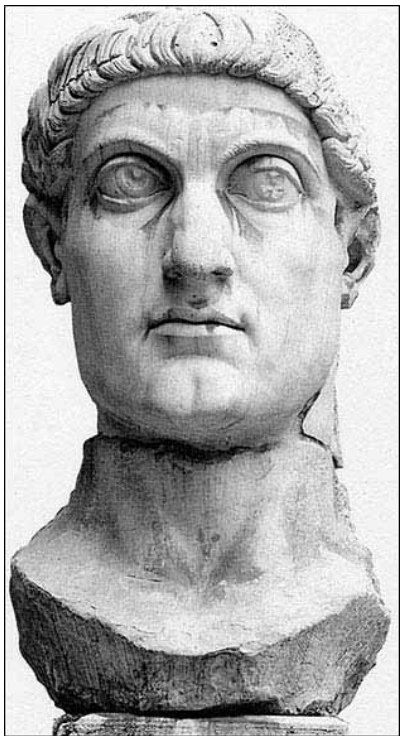

Fig. 5–1 Head of a broken statue of Emperor Constantine.

The grain of ivory or bone allows it to be stained. Staining is an age-old practice which Homer mentions in his epic poem the *Iliad*, where he refers to Minoan and Carian women staining ivory purple.[9] From a much later source, Theophilus Presbyter, who wrote *On Divers Arts* (*c.* 1100 AD), we learn how to stain ivory red.[10] He recommended madder, a plant

which was grown as far north as England. Its long, thin and reddish root was used for dying fabrics and also for staining those ivory objects that were frequently used, such as tau crosses, crozier heads and folding stools. Byzantine diptychs were sometimes stained and then polished to give the tablets an even and permanent shade of either red or purple. If a polychrome finish was desired, this was achieved either by applying paint or gold, or through coloured inlays.

Fig. 5–2 Diptych of the Nicomachi-Symmachi. The ivory panels celebrate the union of two prominent senatorial families. They were commissioned by the family of Q. Aurelius Symmachus (consul in 391). The Nicomachi panel (h. 29.9, w. 12.6 cm) was acquired by the Musée de Cluny, Paris; the Symmachi tablet (h. 29.8, l. 12.2 cm) was purchased by the Victoria and Albert Museum., London.

In his monograph *Consular Diptychs*, Richard Delbrueck referred to traces of colour on at least a third of those works he quoted. The purplish stain, or red and black pigments, and scraps of gold leaf were still discernible. They were usually to be found in the deeper crevices (e.g. on hair or the eyes) or on lettering, which was, as a rule, also traced in red or black – also in green during later periods. He found evidence of colour on book covers which were originally diptychs but had been recut after there was very little demand for them as writing tablets. On these ivories the image originally carved was planed off and the leaf mounted with its obverse side down faced on prepared parchment; the reverse side now carried the new design based on Christian iconography. Those book covers, now usually detached from their bases, often show better preserved traces of colour around the contours of the former image and on its background.[11]

Electron microscopy has become an invaluable tool to conservators of more recent times when trying to determine the manner of surface treatment. The art historian Anthony Cutler questioned the extent of polychromy given to the ivories of the middle Byzantine period, which were more highly polished than those of previous centuries. Although he could detect minute traces of colouring embedded in tool marks on hair or eyes, he came to the conclusion that the polished areas served as highlights and must therefore have been left unpainted. This, he surmised, was part of the artistic concept in wanting to create an effect of illusion. He wrote as follows:

> Precisely because polishing participates so frequently in [this] illusion, one must approach with care the belief that broad areas of a plaque were painted. Zones of dark colour would reflect light less brilliantly; regions covered with lighter pigment would lose their material kinship with other areas. And paint of any sort would conceal polished areas which (as we have just seen) included faces, hands, clothing, architecture and landscape in all its variety, making this penultimate stage of the craftsman's labour pointless. Such colour as is preserved is found in areas left rough or worked to create a textured surface: one does not polish material to which one wishes paint to adhere ... The question now is not whether pigments were used but how extensively, and to what end. No answer can be given as yet.

*

Let us return to the time when the Decree of Luxury was applied. During the period while the office of yearly consulship still existed (at Rome until 534 and at Constantinople for seven years longer, until 541), the customary gifts in the form of diptychs continued, notwithstanding the anti-luxury law of 384, although there had been a cessation of the consular office.[12] Owing to the great quantity of consular and other types of diptychs that was once distributed, a fair sample has survived and what has come down now forms part of collections spread worldwide. Because many of these panels may be precisely dated, their historical value is immense. Our choice of examples is made as much to underpin the historic events as to demonstrate what has already been indicated regarding their colour.

The Liverpool diptych, showing on one leaf Aesculapis and on the other Hygieia, was, like the Nicomachi-Symmachi diptych,[13] a product of the last decades of the fourth century. It was once stained purple, which allowed a polished finish for the smoother areas of body and flowing folds. The panels follow the classical tradition in concept and execution. They are most likely to have come from the same workshop, as did another high-quality panel, *The Ascension*.[14]

The Nicomachi-Symmachi diptych is thought to have commemorated a wedding between the two senatorial families. In 384, however, Q. Aurelius Symmachus would have celebrated the commencement of his year in office as a consul with his own diptych. He was a pagan and a teacher of St Augustine of Hippo who resided in Milan, where St Ambrosius was bishop and under whose influence he came. The year 384 was also when St Hieronymus published the complete gospel in the vernacular language. Milan was, from 388 on, the residence of both eastern and western emperors, Theodosius and Valentinian.

In 312 Christianity was adopted as the official religion of the state; it was not before 391 however that an imperial edict forbade the continuation of any heathen cult practice, whether old or as new – such as the spreading cult of Mithras. During this period of transition from being a pagan state to becoming a Christian state, and probably sometime thereafter, Roman workshops were patronised by both pagans and Christians. It is not surprising therefore to find pagan and Christian sentiments expressed side by side, either still in the classical mode or reflecting the more ornate fashion that began to spread from the east. The diptych of Rufus Probianus (about 400) shows the consul wearing a seemingly plain Roman toga, but younger men who followed him in his office are shown dressed in heavily ornate garments.[15]

Fig. 5–3 Statue group of Mithras slaying the bull, Rome. Roman civilization, 2nd century A.D. Sculptural group Digital with Mithras sacrificing a bull. Venice, Archaeological Museum. © 2013. DeAgostini Picture Library/Scala, Florence.

Ivory carvers entered fully into the ostentatious display of wealth and luxury as they skilfully recreated all manner of finery and goods. These are richly tactile and colourful images, even if sometimes only by association, as they imitate different textures such as the embroidered silk of dresses or hangings, or pearls and jewellery. To what extent pigments once assisted this colourful display of luxury items it is difficult to say as these panels now appear monochrome. But there seems to be no doubt about the role that colour was to play. A panel from *c.* 500, once part of a diptych, shows a seated Byzantine empress. It was intended as a polychrome image, for the dress of the empress is still covered with a painted pattern. Often such details showing embroidery or woven texture were cut in relief and part of the carving.[17]

*

Neither in Rome nor in Byzantium need we look for any major development regarding colour in sculpture. During late antiquity Christian sarcophagi were finished much in the same vein as their pagan counterparts. The retracing of grooves in black and sometimes the highlighting of folds in gold were part of the workshop tradition; however, the tradition was severely challenged for more than one reason.

The hitherto flourishing art of sculpture experienced a contraction, although there was still a market to be satisfied, particularly with new cults springing up – such as that of Mithras – and the public taste for statues on civic architecture with their endless niches. But like the adherents of the Jewish faith, the growing Christian community strongly rejected idol worship and cult figures and was even openly hostile towards those who produced them. Newly converted Christian sculptors were called upon to give up the very job they were good at: making statuary. Tertullian, the third-century Christian apologist, advised the converted artist to earn his bread in a craft which did not require of him the making of idols.

The eleventh canon issued by Hippolytus of Rome (*c.* 170 – *c.* 236) directed the artist within the context of the church's teaching. It says that each maker of images should be instructed that he must under no circumstances make either any idols or anything related to idolatry cults. This applies to the sculptor as much as to the silversmith or painter, or anyone who produces images. Should such a person, after his baptism, continue to produce anything of the kind, he should be taken to task and must do penance. He was allowed to make only objects which are genuinely useful.[18]

Being a sculptor and being a Christian were, for the time being, irreconcilable, although Christian emperors still required statues and pagan patrons still had a taste for the arts. In 391 Theodosius threatened the closure of temples and the destruction of idols. This was no empty threat. We only need examine the evidence of the particular cult already mentioned, which at that time was growing fast and becoming popular throughout the empire. The western version of the cult of Mithras, imported from Iran, sprang up decades after Christianity was established and spread fast and as far as the northern Roman colonies. The beginnings of Mithraism have been speculatively placed during or before the reign of Domitian (81–96 AD); it disappeared towards the end of the fourth century with the rise and state support of Christianity.

The finds of a number of well-preserved cult statues of Mithras slaying the bull, and the fact that many Mithraneae were turned into churches, suggest that iconoclasm had been avoided where possible. Underneath the foundation of such places of worship deposed idolic imageries were often

found buried. Not only were they mostly intact but some were still as brightly coloured as when placed in their cache. The Liebieghaus in Frankfurt has on display a golden-faced carving of Mithras. Cloaked in a flying red mantle, he throws himself onto the white bull, a gesture replicated in all standard Mithraic images. There is little doubt about its symbolism and its mythical message: radiance, strength and perfection (purity) have here been embodied.

*

Throughout history sculpture has repeatedly been rejected with such vehemence that we have to ask how it is possible that mere material objects can incite such a reaction. In the first instance they were created to elicit a positive emotional response, but of course if empathy changed into incomprehension or dislike, the same images may provoke antagonism. Statues of rulers have attracted the hatred of subjects in bondage, and cult images have offended as misrepresentations of a cherished belief. Sculptures are emotive objects and are judged by what a society of a given place and time holds to be true.

To do away with what displeases, even if the object is only of a vicarious kind, is a form of protest – and a powerful one at that. An attack on sculpture not only is damaging to the physical art object but, more importantly, it strikes at what the image stands for. Other ways of getting at the system which uses sculpture as the focus of a propagated belief are by publicly ridiculing the image or by disfiguring the statue through paint, a spoiling tactic recorded long before spray cans were wielded with a lunatic vengeance. The strategy behind the use of the tar brush is to negate the aura which seemingly emanates from the cult object and to destroy the mystical and spiritual qualities which it has in the eyes of the beholder. By degrading the object of veneration he too suffers the hurt, as the message of dissent strikes home.

But why invest feelings in a material object, reasons Tertullian, when after all it is merely of wood or stone, with perhaps a skin of paint for its protection, or an envelope of gold to make it appear brighter and more permanent?

Iconoclasts during the first centuries of the Christian era had two different causes. Initially they defended the Judaic tradition rooted in the second commandment: “Do not make any images of foreign gods.” They demolished pagan cults and their idols. When the Christian church began to use images as a didactic tool the door was flung open to practices that (to some) smacked of idolatry. The dilemma was a theological one. The

Christian teaching which replaced the Jewish law and other ideologies defended the image on the grounds that God created man in his own image and that he revealed himself to mankind as man. The problem was that the images produced began to be revered as if they were of flesh and blood instead being simply memorials to be respected because they reminded the Christian community of Christ's life and teaching on earth.

By the seventh century a new monotheistic faith began to spread: Islam. Its influence in neighbouring Byzantium was soon felt. There, religious images played an integral part in daily life, whereas Islam forbade the depiction of any living creatures. During this and the next century the question of whether or not to retain holy images ended in brutal confrontations between iconophils and iconoclasts. Although basically a theological issue, it had immense political implications. The schism that followed split the church and the state. Furthermore, Byzantium and Rome became two separate political entities and two Christian churches developed: the Orthodox Church in the east and the Roman Catholic Church in the west.

The Orthodox Church perceived the function of the religious image quite differently from the Roman Catholic Church. In Byzantium the making of religious statuary was avoided, but icons (e.g. flat images) were still adored and literally embraced as an important liturgical element. The Roman Church let art be her handmaiden and serve her in the teaching of the gospel. Still, even in the Franco-Roman Empire the impetus for monumental art was lost for the time being. As if the colour had been stripped from its sculptural support, it now appeared spread out on walls and pages. The art of mosaic flourished in the east and in cultural centres under Byzantine influence. No less colourful were the illuminated manuscripts which were created for the Carolingian court. These and other (so-called) minor arts stored up a wealth of artistic experience on which later sculptors drew while again creating monumental art.

Because of the splendidly illuminated books it is still possible to enter fully into the experience of medieval colour perception and colour symbolism. The colours are in most cases as fresh as when first applied, and although we are concerned with colour in sculpture, illuminations allow us to form an idea about preferences for certain hues and possible shifts in taste. Sometimes we need go no further than the book cover to become aware of the importance of colour and its symbolic connotations.

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A ninth-century Carolingian workshop realised new creative possibilities of combining openwork with coloured parchment for a storiated book cover. The centrepiece, which stylistically harks back to antique sources, is pierced and mounted flat like fretwork onto a uniformly coloured base. The green colour of the painted parchment underneath the ivory produces an awareness of an open-air setting. The crown of the tree fills in the upper part of the design, while on either side of its trunk stand two figures; they turn to one another as if in dialogue. The panel is surrounded by five smaller strips showing scenes of Christ's life. They, too, have been worked in *à jour*, that is by fretsawing, but show through its interspaces a pink colour. Traces of gold leaf on the ivory are still discernible. Formerly the panel was catalogued under the title *The Temptation of Christ*.[19] A publication of 1994 refers to it as *The Witness of St John the Baptist*. The entry for it describes the various iconographic details but does not relate these to any of the extant colours, whether on the parchment or the ivory itself. So what does the viewer see? How do the colours assist one's understanding, assuming Christ and John the Baptist have been represented here?

From the frame to the centre, from light to dark via different colour values of gold, white, pink and finally green, the viewer is taken through different perceptual and metaphorical stages. At the centre of the image is the symbolic Tree of Life of the Garden of Creation where the first Adam was tempted. (Christ's own temptation took place in the desert.) Here, as possibly the second Adam, his baptism is the sign of a redemptive life.

The colour green may be reminiscent of the bank of the river Jordan where the baptism took place. Baptism is an act of purification and initiation. Green often expresses renewal, as in nature; and a white garment is associated with spiritual rebirth. The robes of the two figures do not show any trace of colour; the shade of ivory was perhaps used as the appropriate colour value, yet in order to emphasise the whiteness of the garments hair, eyes and sandals have not been painted.

Obviously caution is needed when ascertaining the intention behind a given colour iconography. Over time surfaces often suffer or may be interfered with, leaving us with only a vague idea of what may have been intended. The facts on which we base our assumptions are neither always complete nor in order. A single work of art still tells less than a collection of similar objects, yet unless we know something about the context of related works they, too, leave us guessing about important aspects. Colour symbolism is one such aspect, and is crucial to our understanding of the coloured sculpture of that period.

Already we have observed that certain colour values such as purple,

gold and white were preferred for expressing ideas which were beyond the object of representation. Each colour denotes other values of which it becomes the symbol. As a symbol of power, purple was protected by the very power which the colour represented for, in 424 AD, Theodorus II placed anybody who misappropriated it under a death sentence. Porphyry and the dye from the murex snail were of great material value as they were rare and costly to obtain; purple symbolised the political might behind such wealth.

Colour symbols act as constants for the cadre for which they were chosen. Outside this framework they aquire new meaning which may even be incompatible with the former one. In Christian art purple was reinstated as a symbol of power which was not of this world. Likewise, the brightness and lustre of gold, and its incorruptible quality, symbolised eternity. As a reflector of light, gold now alluded to heavenly and transcendental qualities. Golden mosaics shone back the glory from above, outshining anything of the idolatrous past.

As a growing institution the Christian church was responsible for consistency in teaching and for accommodating and harmonising cultural differences such as exist among the many peoples in her care. Canonical colours were adopted with the intention of regulating the order of worship, fixing the hierarchy of offices within the church, and also of establishing a code of practice for artists who had to translate biblical concepts into form and colour.

The colours white and red are deeply significant in Christian symbolism; they take the initiated straight to the heart of the matter. "Though your sins are like scarlet, they shall be as white as snow, though they are red as crimson, they shall be like wool" (Isaiah 1:18). He knows what is meant. Scarlet is likened to sin and death; hence this is the colour of the Passion of Christ, who conquered both. Yet when Jesus is described as in a purple robe at his trial, this is a direct quotation from the gospel readings of Mark 15:17 and John 19:2, where he is referred to as the king of the Jews. The colour white stands for two concepts: light or anointing and redemption. The book of Revelation (7:9) says "then each of them [the redeemed] was given a white robe"; and the Psalmist writes "he wraps himself in light as with a garment" (Psalm 104:2). White, therefore, is the colour of the elect.

Colour has to be part of something; in the examples discussed it is clothing which is being alluded to. That seems natural since each condition of man or woman requires clothing. Being uncovered, nude, is in biblical terms always deplored as shameful. Therefore, when Isaiah says (61:10) "For he clothed me with garments of salvation and arrayed me in a robe of

righteousness", he speaks of an act of mercy. As in the book of Job (29:14), "I put on righteousness as my clothing; justice was my robe and my turban", clothing becomes a metaphor for a state of being. Hence, in Christian art the garment and its colour often go beyond the visual statement for they contain an aspect of truth difficult to convey in any other way. The blue mantle of the queen of heaven symbolises that which is ethereal and spiritual. We can see the blueness of the firmament, but not what has yet to be revealed to us; that is left to the visionary or to the artistic imagination.

Written references to colour, and in particular to its application to sculpture, are most rare during the earlier part of the Middle Ages. Rabanus Maurus, an ecclesiastical scholar and teacher of Charlemagne, mentions in his compendium *Libri Carolini* the painting of stucco effigies. He also wrote a short work under the heading *De Coloribus*, wherein he explains the symbolic meaning of colours as related to the teaching of the church. Painters and illuminators were thus given guidelines about the application of colour, although it is not a technical manual.[20]

The medieval artist enjoyed colour, although he was bound to adhere to the colour code as laid down by scholars such as Rabanus Maurus. A page in the *Codex Aureus* of the School of Echternach (983–991) exemplifies this ability to let colour speak. The events of Easter morning were painted in every shade. In the three registers several scenes depict various encounters, indoors and outdoors. The Christ figure wears a white robe and a dark purple mantle, the angel at the tomb has light purple wings; both the angel and Christ were given a halo of gold. Both figures have been conceived as of heavenly power and presented as such through their colour values with their symbolic connotations. All the other hues – yellow, ochre, orange, green, red and blue, and some black – are used either to identify or to decorate but not least to give radiance to a momentous daybreak. Painted manuscripts and carved ivories were created for the benefit of members of the court and the bishops and their clergies. But the storiated wooden doors of early churches were for all, whether remaining outside or entering the place of worship. The polychrome reliefs summarised in visual terms the life and death of Christ; they presented in an attractive and memorable way the fundamentals of the Christian faith. Few of the wooden doors have survived, fewer still in their original state of finish, for they were either restored or overpainted or, worse, they were stripped of their colours altogether.

In Rome the basilica of S. Sabina has one of the oldest carved doors. It dates back to the early fifth century and therefore witnesses to the beginnings of Christian iconography. Today the cypress wood from which

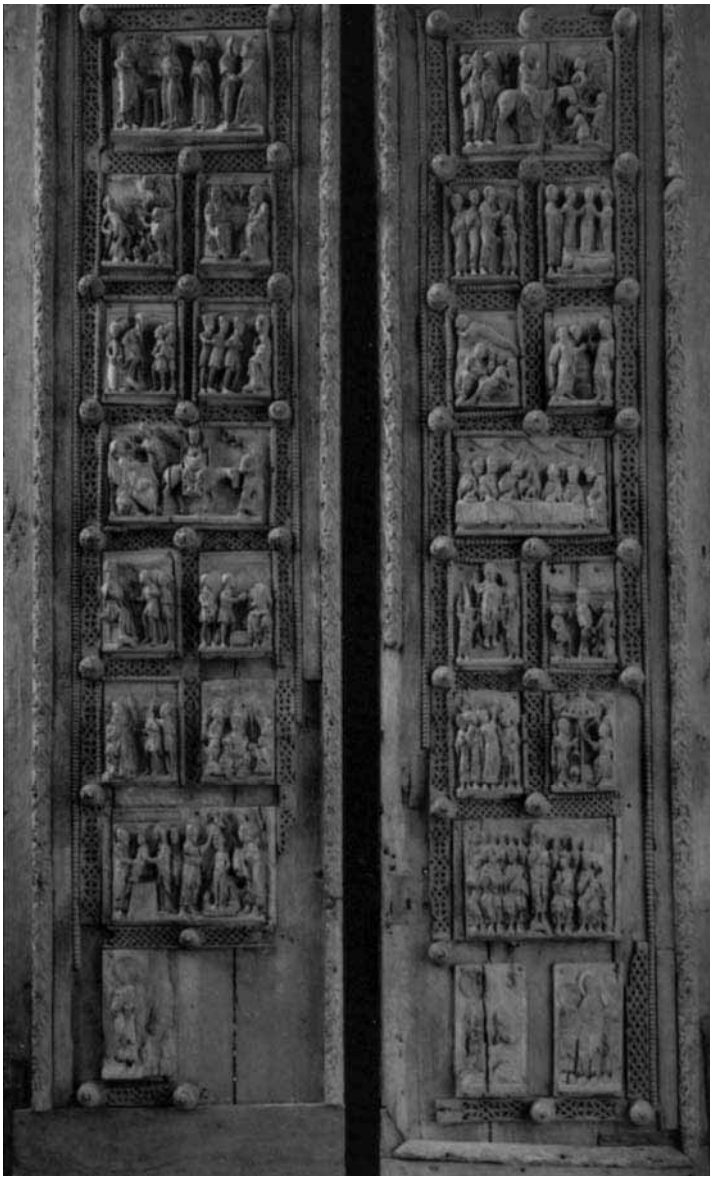

Fig. 5–4 Wooden door of St Maria im Kapitol, Cologne. High relief carved panels, with traces of colour.

the reliefs were carved appears in its natural state; no trace of colour could be found when it was last examined and restored. However, restorers and historians are in agreement that the door is very likely to have been once polychromed.[22]

The eleventh-century door of St Maria im Kapitol in Cologne presents a quite different picture for it has retained at least some of its polychromy under the grey coat of paint which was removed in 1936. The door has weathered the storms of time – except for the lower part, it is structurally in good condition and, indeed, it resembles an enlarged, monumental diptych. The German scholar Anton Legner pointed out that there is a close affinity between the tradition and workshop practice of the ivory carvers and the wood carvers. He thought it most probable that late Carolingian ivory panels served as prototypes. Rudolf Wesenburg, who had analysed the iconography of the door, thought that the conditions were set by the late Carolingian and Ottonian ivory sculpture and goldsmith reliefs as well as the illuminated manuscripts of the first half of the eleventh century.

A complete colour analysis revealed a wide spectrum of colours. There are seven different shades of green, four variants of red, then orange and ochre, but no gold. The faces, hands and feet were painted with a pink for the flesh. Touches of white, yellow, azurite and, more sparingly, black complete the range of colours used. They were treated like local colours, set side by side or placed on top of one another to complete or complement. The panels boldly summarise, in form and colour, biblical scenes; they illustrate and decorate all in one. The door was twice polychromed within a short space of time. The original paint application (1049) was made over a fairly thick wood sealant, a glue which still sat on the surface when, unprimed, the carvings were painted. For the repaint (1065) most parts of the panels were covered with a primer, a mixture of glue and chalk, before high-quality pigments were applied. The paints used for the first layer were sometimes mixed with white to produce a lighter tone. The second layer shows that colours were applied flat over a yellow-golden colour that covers the background. Any finer details were drawn in with a fine brush to delineate the form.

The wooden door of St Maria im Kapitol displays an array of artistic skills, all blending into one coherent expression. The style of the reliefs suggests the influence of ivory carvings, the colouring that of illuminated manuscripts.

Carved wooden doors had their counterparts in bronze doors, of which more survived. Carpented doors with polychromed wooden reliefs continued to be part of church architecture. The Romanesque door of St

Salvator in Gurk (in Carinthia) dates back to about 1200. Only portions of its mounted reliefs have survived, but they reiterate the idea of the interrelationship between the different media. The carvings are in conception and style a direct commentary on illuminated manuscripts. The design, with its intertwining branches, is based on the motif of the Tree of Jesse. Within each roundel a scene is presented in summary style and the polychromy completes the impression of reading a folio page. To the luminous colours of blue, green and red, gold was added for glorioles and the borders of the garments. The branches too appear gilded and the leafy tendrils were decoratively painted in green and gold. The flat door panel is a reddish-brown, which is not its original coating. The carvings had been removed at least twice, the last time to rectify the order of sequence of the mounts.

Initially sculptors concentrated on small-scale work and on the relief with its narrative content. One of the main themes was the crucifixion of Christ. It was portrayed as the central event around which other themes which related to the gospel were depicted. Such a relief was not a composition in the strictest sense but more a pastiche of events. Each one could be lifted out as a unit and reworked. The carving technique of tenth-century reliefs began to reflect the tension between the flat background and the space that surrounds the carved figures. The modelling of the scenes of the ivory cover of the Abbess Theophanu (*c.* 1050) shows a tendency towards carving in the round; the deep undercuts, which cast shadows, make them appear separate and distinct. The freeing of the figure from the constraints of its background and frame was but a natural development.

The Bucco Crucifix, a small crucifix of cedar wood (*c.* 1059), may well have been conceived in the same Cologne workshop that produced the doors of St Maria im Kapitol or the ivory book cover for Theophanu. It was probably once covered in precious metal and encased to be worn as a pectoral cross by Bishop Burchard II of Halberstadt. The figure of Christ, although part of the cross, appears now more distinct, even monumental in its conception. In this respect it continued an earlier trend set by the Gero Crucifix (before 976), which is a cult image and a reliquary in one. As the receptacle of a relic it was venerated and accorded a special place in worship. Many relics had been brought back by pilgrims from the Holy Land. The piece of cedar wood of the Bucco cross may have been prized as a relic.

The Gero Crucifix, although once polychromed, has lost all its original colouring and we are thus deprived of seeing this powerful image as once intended. Two twelfth-century works, the Forstenrieder Crucifix and the

Freudenstadt Lectern, have recently been restored and closely studied; they are among the most representative images of their time that allow us to form an idea of colour in Romanesque wooden sculpture.

The Forstenrieder Crucifix (*c.* 1200), with its strongly modelled Christ figure, was produced in south Germany more than two centuries later than the Gero Crucifix. The later work has a direct and forceful expression; form and colour complement. The art historian Johannes Taubert refers to the double function of polychromy in Romanesque sculpture. Without the colouring the sculpted image is incomplete; the presentation of the finer details of form is left to the brush; colour concludes and makes visible the tangible and intangible. Brush lines in dark ochre outline the muscles of the body; black, brown and rouge emphasise facial expression and give the figure its character. Over the flesh-coloured body shadows and highlights are also painted in to raise the flatness of an underdeveloped or ill-defined sculptural support. The calligraphic nature of the finish suggests its origin in flat surface painting.

On the loin cloth an array of colours is set next to one another in a highly decorative fashion. The underlying function is to describe the piece of garment, with its knot, folds, underside and border along its hemline. But the painter lost sight of, or interest in, the turns and interplays of the surfaces of the garment, for he used three colours for the two sides of the cloth. This "irrational" approach, which we have also noticed in the way shadows and highlights were introduced, is – apart from the use of glowing colours – a characteristic of Romanesque art. To find out what shades were prevalent during that period we need to turn to the second work.

The Freudenstadt Lectern is a functional object; it is an example of church furniture but was designed as a sculptural unit. The four figures of the evangelists carry the actual book support, which is also carved, but with the symbols of the evangelists. Between 1889 and 1980 the lectern has been restored four times. In 1889 it still had an additional Baroque music stand attached to it. In 1980 the most recent analyses were published by restorers, who had made use of the latest methods of analysing colours and materials.

The wood used for this work is willow (osier), which may have been locally obtained. The original polychromy was painted over several times during the course of time. The last restoration exposed a rich array of colours. Ten different types of pigment were noted. The splendour of colour was obtained largely by placing the shades available in a relationship to one another that further enhanced their colour values rather than by mixing and obtaining more tints and subtler nuances. For instance,

the two red shades, the more opaque shade cinnabar (vermilion) and the lighter zinnober, were employed to contrast with one another, a feature peculiar to the Romanesque period. Later, the yellowish zinnober lost its importance as a single colour more and more. The contrast between orange and red was originally much stronger. The use of pure, unmixed pigments is typical of the period. They were often applied in layers and next to complementary colours to achieve full plasticity.

The polychromy of wooden sculptures was prepared like the panels of paintings: over a chalk preparation the mixture of pigment and egg albumen was painted in layer by layer. For silver foil an animal glue was used. On the Freudenstadt Lectern silver foil was found around the symbols of the evangelists; on the Forstenrieder Crucifix the loin cloth showed some traces of it. Beside cinnabar and zinnober, lapis lazuli, white, auripigment (also known as orpiment) ochre, vivianit (blue ochre) and a copper green gave the work its brilliance. Black served to outline contours and pick out details; it was derived from plants. Auripigment and lapis lazuli had to be traded in from afar, whereas vivianit was found regionally (Bavarian forest).

The carved figures are symmetrically arranged – or, rather, it is through their colours that a symmetry has been established. As opposite colour pairs the four evangelists wear either red or green-blue robes and white undergarments with blue shadows or orange with red. A scatter pattern painted in free hand covers the garment of each figure, whose respective symbol is immediately above in high relief. The lion above the figure of St Mark was given a uniform grey-pink shade while the curls of its mane were traced in black.

The bright and jewel-like colours applied to the Freudenstadt Lectern can stand comparison with those found on quite a different class of sculptural object to which enamels, precious stones and metals have been added. Indeed, these objects became jewels in their own right. They are the reliquaries produced in the workshops of goldsmiths rather than in those managed by sculptors.

There are two main types of reliquary: the anthropomorphic receptacle and the architectural model. Both have features that point to developments in monumental art and architecture. The first type, in which may be counted the crucifixes already mentioned, is based on the human form, whether whole or in parts such as the bust or an arm or a foot. As the cult of saints proliferated, so did the objects of veneration. However, this trend was not applauded by everybody. One particular reliquary statue earned a caustic remark. St Bernard of Clairvaux (*c.* 1090–1153), while still a student at Chartres, visited sanctuaries at Aurillac and Conques together

with a friend. There he saw first the statue of St Géraud, then the one of St Faith, whose miracles he recounted later in a book.[23] He related the impression the statue of St Géraud (all of the purest gold and set with precious stones) had made on him. He had turned to his companion and wryly asked, "Whom does this idol resemble? Have Jupiter or Mars any comparable statues to show off?" Bernard (the founder of the Cistercian order) was no lover of the sculpted statues of saints; to him they smacked of paganism.[24]

The seated statue of St Faith still has most of her mounted jewels, which cover the figure like a pattern with a scatter motif. They are mostly bright blue set against gold. The cult figure attracted great throngs of pilgrims who, believing in their miraculous effect, flocked to see any number of similar cult images.

Two reliquaries of the second type show between them the state of art and craft towards the end of the twelfth century. Both come from the Rhine-Maas area. The Eltenberg Reliquary (*c.* 1180)[25] is of oak mounted with *champlevé* enamel, copper gilt and ivory. The effect of brightness comes from the contrast in the use of the materials. Blue dominates where there is enamelling; the rest of the structure is in copper gilt. The figures and plaques are of ivory with some traces of colour, particularly in the letters of the phylacteries. While this work is modelled on a centrally planned edifice with a raised dome, the Anno Reliquary (*c.* 1183)[26] is based on a longhouse with a steep gable. Set jewels, enamelled plaques and elaborate goldsmith work abound. To focus on just a section of the structure, the double pillar, from its base upwards to the enamelled plaque above the modelled saint: there are several features that have their counterparts elsewhere. Similarly decorated pillars are depicted in illuminated manuscripts[27] and there are still some to be seen in situ in church interiors in France. The main characteristic is the colourfulness of the entire setting: pillar, capital and architectural surround. The Anno Reliquary has a series of double pillars which are enamelled. The colours of the elaborate patterns are dark blue on gold, purple with white, and bluish-green. A gilded capital is placed on top of each pair of pillars. Each capital is delicately modelled, showing gilded figures of either men or beasts among foliage. Festooned from each platform are treble arches, and they in turn are linked by more arches. Each space in between is occupied with the half-figure of a saint. The gilt metal casts grow out of the capitals. Above the course of multiple arches is a band made up of decorated enamelled plaques which alternate with others made of worked gold and are studded with mounted gems of different colours. The entire reliquary is an elaboration of many such details, the work of a goldsmith rather than of

a sculptor. Yet, when it came to the embellishment of church interiors, the sculptor and painter proved equally adept in blending decor and images which required a similar degree of elaboration. To appreciate this we need to go to France: to Chauvigny (Poitou), Castenau-Riviere-Basse or Saint-Sever (Landes).

The choir of the church of Saint-Pierre at Chauvigny is as colourful as the Anno Reliquary. Much of the available surface – whether on walls, ceiling or pillars – is decorated with some kind of coloured design. The capitals above the single polychrome columns were carved and then painted. Each capital is unique; variety abounds. The figurative carvings of the capitals are cut deep into the block. Where necessary the drill was used, for instance for the eyes or detail of the pattern. The backdrop and any recesses were painted in a dark red; so, too, were the incised fold lines of the various figures. Although the choir had been repeatedly restored since it was first built during the second half of the twelfth century, it conveys the overall impression that craftsmen such as Godfridus must have intended. He inscribed his name on the capital which depicts the Adoration of the Magi.

No less impressive are the carved and coloured capitals at Saint-Sever. Like those at Chauvigny, no two are identical with regard to their design. They were individually conceived, thus offering scope for the craftsmen to try out new ideas. Some are based on narratives; others are perhaps symbolic, or purely decorative as if the design had come straight from a pattern book – as, for example, the capital with the man between two griffins. There are vague reminiscences of Corinthian capitals. The carved section of figures retained the scroll element; a painted foliated border above this section completes the capital. All outlines and interior lines were picked out in black. The dark and light contrast of the painted capital follows a regular pattern owing to the symmetrical design. In fact, quite a number of Romanesque capitals are based on configurations that show two creatures in symmetry. This is also the case at Canterbury Cathedral, where one of the two polychrome capitals in St Gabriel's Chapel shows a double-bodied lion. Traces of red-brown for the background and black lines are still discernible. Scholars have suggested that oriental textiles, such as Byzantine silks, may have influenced the design. A pair of addorsed griffins and a couple of lions whose heads merge into one are motifs attributable to woven silks as well as to carvings.

As already hinted, many Romanesque carved capitals seem to have another characteristic in common: they tend to be one-off designs,[28] yet part of a design vocabulary common to other art forms. Perhaps the craftsmen, many of whom were itinerants and hired by another *Bauhütte*

or masons' lodge, had to do a sample workpiece. That would explain why, for instance, in the crypt of Canterbury Cathedral many pillars and capitals were of a heavier cushion form and "unfinished". Sketches made from illuminated manuscripts, silks or ivory carvings, and ideas picked up while travelling, formed the content of the medieval pattern book. The sketch book (*c.* 1250) which Villard de Honnecourt produced covers many interests, from architectural problems to designs for a lectern and some basic instructions in the art of drawing.

The carved and painted capitals and pillars relate closely to wall-paintings. The pillars were treated more like a section of the wall wrapped around a column, while the carvings sometimes continued the story depicted in the murals that decorated the interior of a chapel or the choir. Architectural sculpture also transformed the exterior of important churches during the late Romanesque period. The portal became the focus for decorative schemes. For the tympanum, the hemispherical space above the doors, new subjects were developed, carved and usually paint finished.

Well above eye-level, the colour of the sculptured area often blends in with the rest of the masonry of the edifice. Rarely is the onlooker in a position to examine closely the method employed by the sculptor or to study the finish of the work. The art historian Neil Stratford was however able to examine the tympanum of the interior portal of the narthex at Vézelay (*c.* 1118). He related what he saw while on a scaffold in a paper. He mentioned that "[the tympanum] reveals the most extensive and sophisticated range of painted detail" (there is nothing surprising about this, of course). It would never have occurred to this sculptor that parts of his tympanum were "unfinished"; the finer details were to be supplied by the painter's brush; for instance, on the lintel the nails of the horse's hooves, the holes for the thongs on some of the shoes and even the borders of garments are picked out in paint. The garment's border is particularly interesting; on one little figure towards the right end of the lintel it shows how interchangeable in the sculptor's mind paint and the drill were. Two figures just to the left have drilled borders to their garments, but on this occasion, having failed to drill the border, the detail has simply been supplied in paint. In fact so intimately does this painted detail (now sadly blackened and eroded) harmonise with and refine the sculpture that there exists a real possibility that the painter was none other than the sculptor himself. The painted detail must at least have been taken into account by the sculptor from the start of his work.[25]

Another tympanum was minutely studied, although under different circumstances. Between 1928 and 1931 Helen Kleinschmidt reconstructed the pieces of the west portal tympanum of Cluny Abbey (*c.* 1088 to *c.*

1112), which had been destroyed in 1810 when the portal was blown up with gunpowder. Having recovered about a tenth of the entire portal, she was able to establish the iconography: Christ seated within a mandorla, a vertical almond shape held up by angels and surrounded by cherubim and the four symbols of the gospel writers. Her analysis of the fragments also revealed all the colours applied and she was thus able to establish the colour scheme of the original polychromy.

Several important features emerged. The opaque body colour or tempera had been put on in the most part thickly and in layers. The colours were extremely vivid and garish, yet the best preserved pieces appeared harmonious and very pleasing, according to Kleinschmidt. In her article she recorded an observation made by Charles Oursel (Bibliotheque Municipale, Dijon), who thought that the pigments used seemed to be the same as those used in the twelfth-century Cistercian manuscripts (Bible of St Stephen Harding). She agreed with this opinion.

The colours range from a red of varying intensity to ochre yellow and another lighter and brighter yellow – sparsely used – to cobalt blue, white, black and grey, and russet. A greyish-green was derived from mixing ochre and cobalt. She noted that "a great many fragments show two or three different colours, one on top of the other: ochre, or white, under red or green being particular common". The stronger shades were sometimes modified by superimposing a boldly contrasting colour, such as green on red. Two or three layers of different colours also suggest successive repainting.

Kleinschmidt observed that the colouring of the architectural framework and purely decorative carving was painted mostly in red, green and yellow and their derivatives, blue being reserved for the background of the mounted sculptures which make up the great iconographic composition. While white was used on the figures on the lintel (which she called "men in white"), gilding was applied to various detail to "enhance the splendour of the heavenly vision".

The description of the tympanum suggests that it must have once been ablaze with colour. Within the blue concave field the mandorla stood out. Heavily undercut and painted red over yellow, it had a flame-like appearance which was further enhanced by gilding. Cells with four facets each, with which the inner area was covered, reflected the light. Surrounded by this brilliance was the central figure, the enthroned Christ, who wore a deep red mantle. The shades of the folds were painted in green. Ochre over white served the tunic, whereas the halo was a flaming yellow over red over white like the mandorla. Wing fragments of the angelic beings had colours ranging from green to salmon pink, ochre or tan, bright yellow and black.

There is no doubt that the artist tried to stage manage a special effect with which to impress the approaching onlooker in order to let sink in the symbolic meaning of Christ in Majesty.

Fig. 5–5 Abbey of la Madaleine, Vézelay, middle tympanum of the narthex of the church (1140–1150). © Wikimedia Commons.

Notes

[1] Cyril Mango, *The Art of the Byzantine Empire, 312–1453* (Englewood Cliffs NJ: Prentice-Hall 1972), p. 23.
[2] *Minerva*, 18, Vol. 5, 5 (1995).
[3] The group is now in St Mark's Square, Venice.
[4] Giorgio Vasari, *Vasari on Technique*, ed. G. Baldwin Brown, transl. into English Louisa S. Maclehose (Mineola NY: Dover Publications 1960), p. 101ff.
[5] Richard Delbrueck, *Die Consular Diptychen und verwandte Denkmäler* (W. de Gruyter: Berlin 1929).
[6] Anthony Cutler, *The Hand of the Master: Craftsmanship, ivory, and society in Byzantium* (Princeton NJ: Princeton University Press 1994).
[9] *Iliad*, 4.141–142.
[10] *Theophilus – On Divers Arts*, transl. J.G. Hawthorne and C.S. Smith ((Mineola NY: Dover Art Instruction 1979), Book 3, Chapter 94.
[11] Antony Hammond, *Consular Diptychs: Rhetoric and the languages of art in sixth-century Constantinople* (London: Victoria and Albert Museum); Margaret Longhurst, Catalogue of Carvings in Ivory [in the Victoria and Albert Museum], 70, fig. 16.
[12] In February 391 Theodosius prohibited sacrifices and the visiting of temples. In November 392 he made his edicts of the previous year more stringent by completely prohibiting the worship of pagan gods.
[13] The two panels of the diptych are now in two different collections: the Nicomachi panel is in the Museé de Cluny, Paris and the Symmachi panel is in the Victoria and Albert Museum, London.
[14] Bayerisches National Museum, Munich.
[15] See Felix, Rome 428, Basilius, Rome 480, Areobindus, Cple 506.
[17] Delbrueck (1929), p. 6. Delbrueck thought that the anti-luxury law may have been reinforced. The taking up of office of a one-year consulship also occasioned the presentation of a diptych for which however an imperial dispensation had to be sought – which usually was granted.
[18] Canons 10–15 describe conditions for the admission of converts. Certain occupations are incompatible with Christian life; only under compulsion may a Christian be a soldier.
[19] Martin Büchsel, *Das Zeugnis des Johannes* (Frankfurt: Liebieghaus), Liebieghaus Monographie, 16.
[20] Christian Beutler, "Documents sur la Sculpture Carolingienne", in *Gazette des Beaux Arts* (1962/3).
[22] Gisela Jeremias, *Die Holztür der Basilika S. Sabina in Rom* (Tübingen: Wasmuth 1980), p. 16.
[23] Bernard gives an account of their impression in his book *Miracles de sainte Foy* (reprinted in Bernard de Clairvaux, Commission d'histoire de L'ordre de Citeaux, Vol. 3 (Paris, 1953); cf. also: Hans Baltung, *Likeness and Presence: A history of the image before the era of art* (1994), Appendix No. 34, p. 536; "The statue and saints cult in the Abbey of Conques", in Bernard of Angers' Book of the Miracles

of St Faith (11th century). The entire passage is given in English translation: "According to an old tradition, every church here [in the Auvergne] has a statue of its saint made of gold, silver, or other metal to enclose the head or another part of the saint. This practice was considered a superstition by enlightened people and seems at first sight to continue the cult of gods or demons. I too was thought less enough to see it as an abuse of the Christian faith. I first saw the statue of St Gerald, made entirely of pure gold and precious stones, on the altar in Aurillac. His face was animated by such a living expression that his eyes seemed fixed upon us and the people could read from the luster of these eyes whether their plea had been heard. I turned, as I now remorsefully confess, to my companion Bernier and asked him in Latin: 'Brother, what do you make of this idol? Would Jupiter and Mars think the statue worthy of them?' Bernier, who shared my feelings, agreed emphatically. As true veneration is only fittingly directed at God, it seems absurd to make statues of stone, wood, and bronze, unless of our Lord on the cross. For it is customary throughout Christendom to venerate the divine crucifix in sculpture and bronze, to guide our piety to his Passion. But to remember the saints … one should be content with the truthful writings of a book or with paintings that show them on frescoed walls. Statues have only been justified on grounds of the long-established traditions that cannot be eradicated from the common people. The error was so popular here that I should have been treated like a criminal if I had openly insulted the statue." (1.13) In the next section, Bernard justified his change of mind as regards the veneration of statues of saints: "Her image [St Faith] is not an impure idol but a holy memento that invites pious devotion and strengthens our wish for the powerful intercession of the saint."

[24] None of the foundations in his order expended money on costly works of art since that would have been contrary to what they preached: simplicity in their way of life and help for the poor.

[25] Victoria and Albert Museum, London.

[26] The Anno shrine is kept in a side chapel of the church of the abbey of St Michael, which is on the Michaelsberg in Siegburg. Partly responsible for the work is the goldsmith and enamel painter Nikolaus of Verdun, who created several notable works of the kind.

[27] Ill. MSS (pillars), Sacramentary of Henry II German, Regensburg, before 1014 (Munich, Staatsbibliothek, Cod. Lat. 4456), St Gregory.

[28] N. Stratford, *Romanesque Sculpture in Burgundy* (Paris: Picard 1990). He remarked that they were frequently carved in pairs.

[29] The tympanum of Vézeley has since been restored.

CHAPTER SIX

THE CRAFTED GLORY OF LATE MEDIEVAL SCULPTURE

> St Bonaventura compared the soul to a polychromed statue that, once its colour is removed, loses its beauty.[1]

A Spanish illuminated manuscript from the second half of the thirteenth century, *Las Contigas* of King Alfonso X, shows a painter seated on steps outside a church. He is painting a statue of the Virgin and Child set in a niche. To his left an apprentice prepares some colour on a raised slab. This is one of a number of miniatures of the Gothic period which depict the image-maker at work. Most of these illustrations show either the sculptor chipping away at a statue or a painter polychroming. There is another group of illuminated manuscripts which refer to a statue as an idol. As historical documents these are the most telling pictures of medieval workshops and their various activities. They also provide a setting for the artistic product and not least tell of its reception in society. The volume of production of cult images during the Middle Ages is indicative of their great social and commercial importance.

Our knowledge of how polychrome images were made and under what conditions comes from various sources: painted miniatures, contracts, manuals on various arts, collections of colour recipes and documents relating to particular workshops and their products. However, it is the object itself, the statue or the altarpiece, that reveals important facts about the materials which were used and the method and techniques employed. Modern scientific research allows the most detailed examination of the surface or material structure of individual works. Art historians have yet to collate and interpret much of these data and in the light of them revise the history of medieval art.

The medieval sculptor availed himself of all the traditional materials, such as stone, wood, ivory, alabaster, clay for terracotta, and precious metals. Alabaster and wood were particularly important to the sculptor of the late fourteenth and fifteenth centuries when the growing demand for holy images encouraged the organisation of larger workshops. Statues of

saints and retables were the main types of sculpture made, much of it for export. While these were of English, Flemish, French or German origin and supplied to countries as far apart as Sweden and Spain, architectural sculpture and tombs or effigies reflected local traditions. The spread of iconographic ideas may be traced throughout Europe, but on the whole there were strong regional traditions, often on account of one master and his workshop. Certain localities or regions will be of particular interest in the context of this study; also, some dates stand out because they relate to clusters of events which are significant to the development of colour in sculpture.

The period we are concerned with allows us to study closely some important issues with regard to polychromy. During the three centuries from 1200 to 1500 several significant changes occurred which mark the transition from one phase to another, and from one style to the next. Primarily there was a shift away from the purely chromatic image; bright colours competed with ever increasing areas of gold, leaving less surface that required paint. The actual coloured areas however assumed greater realism. Heads and hands, or the bodies of Crucifixion scenes, gained in natural expression.

The glistening gold which covered the larger part of the image's surface cancelled much of the visual differentiation normally achieved through polychromy. The eye began to adjust to seeing less vivid colouring and more lustre. The general impression is still polychromatic, although now modified. Also, a largely gilded and an entirely glazed wooden altarpiece are close to one another as regards their general chromatic effect. By the time of the Reformation there was not just a perceptible shift toward less colour, but a cultural trend to reduce, if not altogether remove, colour from places that had a religious function.

Cultural historians recognise that chromoclasm was as much a reality of the Middle Ages as was iconoclasm, but more difficult to account for. No attempt will be made here to resolve a problem which still needs to be thoroughly investigated. However, workshop practice and the religious and cultural climate of the time are the two areas from which some insights may be obtained. While wondering what happened to colour, its carrier (the carved forms) suffered even more at the hands of iconoclasts, or image-breakers.

Two major iconoclastic periods have ruptured the cultural development of eastern and western European art. The Byzantine iconoclasm of the eighth and ninth centuries and the iconoclastic outbreaks during the Reformation period mainly targeted sculpture, largely because the cult figure was linked with idolatry. Yet in spite of all the damage done to

sculpture, then and during the subsequent centuries, an adequate body of work has survived. Some pieces are still in an excellent condition and to be experienced as when first completed, although not always in their planned setting.

Fig. 6–1 Woodcut, coloured, 1530, by Erhard Schön (*c*. 1491–1542), Nuremberg, Germany. *Iconoclasm*, at the beginning of the Protestant Reformation. [Original title: *Klagrede der armen verfolgten Götzen und Tempelbilder*,] Schlossmuseum Gotha Inv. no. G 74,4.] © Wikimedia commons.

At the royal Abbey of Fontevraud in France several polychrome effigies of English kings and queens are on full display, their luminous colour still attracting the attention of the onlooker. They were hidden from view during the French Revolution, and forgotten until the Gothic revivalist C.A. Stothard[2] discovered them at the beginning of the nineteenth century. In 1817 he published his two volumes *The Monumental Effigies of Great Britain*, together comprising a monumental work, for he described all the known effigies of the period[3] and, by way of hand-coloured engravings, reconstructed their original colour schemes.

These tombs are commemorative monuments and were created under royal patronage. The effigies of the monarch and his consort were laid out in full regalia, each on his or her couch as if only momentarily resting. The carved figures were painted in bright colours with ornamental strew patterns (featuring repeated motifs) added to the robes and mantles and to the sheets and pillows that cover their beds. Hair and facial detail and the accessories were also painted. The two dominant colours are red and blue, although green, gold and purple are also part of the scheme. Stothard recorded the observations he made when examining the effigy of Henry II (1171) at Fontevraud:

> the whole is executed in free stone, and in a style much resembling the seals of the time, but infinitely superior to what we should expect, judging by the effigy of King John, which in comparison with this [*sic* Henry II] is a very inferior production.
>
> The character of the face is strongly marked by high cheek-bones and projecting lips and chin; the beard is painted, and pencilled like a miniature; to represent it being close shaven; the mantle is fastened by a fibula on the right shoulder, its colour has been, like the cushion under the head, of a deep chocolate brown; the dalmatic is crimson, and appears to have been starred or flowered with gold. The mantle probably was originally ornamented in a similar manner. The boots are green, ornamented with gold, on which are fastened with red leathers the gold spurs ...

Two generations later, when King Henry III died (1272), only his heart was taken to Fontevraud, the Angevins' foundation and burial-place. His body was laid to rest in Westminster Abbey, the new royal shrine for English kings and queens which he had rebuilt in keeping with the great churches in the Ile-de-France. During the course of the thirteenth century the programme of church building in England had greatly expanded. Also, the cult of local saints increased and the custom of setting up effigies was taken up by the lesser nobility. By mid-century a new style began to blend in with the old. Gothic forms and became the hallmark of an age of chivalry no less than of devotion and private piety.

A tradition may allow for local variations and adjust to regional stylistic trends, but any foreign mode grafted in remains conspicuous. With the tomb of Henry III two traditions came together. The double-tier tomb construction and its embellishment in cosmata on the one hand, and the effigy cast in gilt bronze on the other, combine northern and southern craftsmanship. While the tomb is of Purbeck marble, the sides are slabs of Italian porphyry; also, the tomb was once inlaid with mosaic gilded and brightly coloured with tesserae made of red and green porphyry, marble and glass. Cosmati workers from Italy brought the material and their skill to this highly specialised job. In Italy this ancient craft was revived during the second half of the thirteenth century when the sarcophagus of Pope Clement IV (d. 1268) was decorated with Cosmati mosaic. The sculptor Arnolfo di Cambio (d. probably 1302) similarly gave colour to the tombs of Pope Honorius IV at Rome and of Cardinal Guillaume de Braye at Orvieto. The choice of this type of decoration on an English royal tomb may reflect the king's spiritual kinship with and loyalty to Rome. This devout monarch was close to the Franciscans and the Roman Church. During the rebuilding of the abbey he employed Italian Cosmati workers for the pavement in front of the altar.

The effigy (made in the likeness of the king) was cast and gilded by a German, Master William Torel, a sculptor and goldsmith. However, the "likeness" referred to in the payment account does not observe the natural colouring of the person portrayed. The gilding uniformly covers both figure and bed. A regular incised pattern, visible only at close range, also blends in, thus the metallic sheen neutralises all distinctions between different substances and their colours. The golden image of the king and the polychrome tomb and canopy describe two spheres of existence.

The precise handling and distribution of the coloured materials give the entire work a calculated approach with regard to its intended effect. The aura and awe that surrounded the laying-in-state was duly enshrined in this monument, no less so because of its symbolic colours, gold and white with purple and green. A century later, in Burgundy, the funerary monument of Philip the Bold was inspired by different sentiments and social mores. The two achromatic colours black and white dominate. Gold application picks out architectural details or adds ornament. Red is the only chromatic colour, and it was very sparingly used. On a stepped base of black Dinant marble sits the actual tomb, which is encased in white alabaster from Vizille, near Grenoble. This middle section, which has a series of niches on all four sides, supports the black marble top, which in turn carries the alabaster image of the duke and two angels.

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The effigy of Philip the Bold is laid out in the traditional manner. It is the forty weepers within the Gothic niches that set the scene that, in reality, was the funerary cortege. The hired mourners paced the procession and set the mood by weeping, wailing and praying for the deceased person. Here, in alabaster, their white habits merit no colouring, but their faces and accessories offered the choice of whether or not to add further colour to the monument. In fact, only a selected few items were picked out in paint: the odd belt or shoes and one or two rosaries. The last of these are as red as rose pedals. The rosary is more than a decorative item, for it draws attention to two facts and items of contemporary interest: firstly, Philip the Bold was associated with the Rosary confraternity in Burgundy and, secondly, the Dominicans introduced the rosary as a form of prayer discipline. The hooded monks in the niches of the tomb are of the Dominican order. Pathos and dignity are well expressed through the choice of contrastive materials. The black and white tomb seems out of its time – in its austerity, almost a Protestant monument.

Fig. 6–2 Tomb of Philip the Bold, by Jean de Marville, Claus de Werve and Claus Sluter (1389–1405/6). Champmol, Dijon, France.

The tomb was the work of three successive masters. Claus Sluter (1340–1405/6) was one of them and subsequently he was responsible for two other major works: a Calvary group and the Moses Fountain, which was his masterpiece. For the latter work he carved between 1395 and 1403 six full-length figures of prophets and five angels. Although the work is usually linked with his name, the painter Jean Malouel also had a claim on the monument because he was commissioned to paint the entire fountain. To engage a polychromer was a fairly common practice. Medieval workshops followed rather strict guide lines regarding who was allowed to do what. Only a qualified painter was permitted to colour carved images, while for the art of gilding another specialist was usually engaged – as was the case here, for we know his name, a certain Herman of Cologne.

A few years earlier the sculptor Jacques de Baerze and the painter Melchior Broederlam successfully collaborated on two large retables for the same court, which were soon after their completion inspected by a ducal commission; the court sculptor Claus Sluter was one of its officers. On that occasion a waxed canvas had been bought to protect the work during transit from Broederlam's workshop in Ypres to the Charterhouse

de Champmol. Sluter later acquired the canvas and used it as a tent during the polychroming of another important work for the Charterhouse, his Calvary group, also known as the Great Cross, which he had just finished. This was before he had begun the Moses Fountain. It must from the outset have been the intention to have the Moses Fountain painted. This posed a problem for how was one to protect the rich gilding and lavish polychromy of the fountain from exposure to all kinds of weather? The Sluter scholar Kathleen Morand wrote of the care and attention the work received:

> in 1411 a wooden pavilion with dome supported on columns replaced a series of provisional enclosures that had incorporated the waxed canvas. The more substantial structure that today surrounds the *Puits de Moise* has double arcade openings on each face to fit hexagonal forms and was erected, according to Saint-Memin, in 1638.

It seems unlikely that Sluter designed the well to be placed within an enclosure, for the fountain was conceived as a free-standing monument to be seen unhindered by any exterior structure. In spite of all the effort and expense, the gilding and paint have now largely disappeared. Only on some of the carvings, such as the angel between the figures of Moses and King David, does enough colouring remain to let us imagine the original appearance of the fountain. No one has yet attempted to reconstruct its original polychromy, as Stothard did for the Fontevrault tombs.

The painter Jean Malouel's art has faded away, once having clad and preserved the delicate carvings. Now we concentrate entirely on Sluter's ability to render realistic expressions in stone, flesh-like and spirited. He even had golden-rimmed spectacles especially made by a goldsmith for his statue of Jeremiah to stress the prophet's worn-out eyes; they also make the figure appear contemporaneous to the pilgrims visiting the monument.

Another of Sluter's carvings for the Charterhouse de Champmol, a *Virgin and Child* for the porch, lacks any colouring – that is, the work is entirely monochrome. His detailed, sensitive carving technique seems not to demand completion or correction in another medium. Are these works, the statue and the figures of the ducal tomb, indicative of a new approach, namely to rely on realistically carved images and to let the material speak for itself?

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Alabaster as a material was gaining in popularity during the late Middle Ages. It is easily cut and also visually quite pleasing. It takes a high polish which makes the surface appear almost translucent. Any

colouring was usually directly applied, sparingly however if the alabaster was of good quality. The stone was quarried in different parts of Germany, then in the Lille–Tournai area, and also in parts of England where it gave rise to local industries. The most ancient locality associated with a flourishing alabaster production was an Egyptian town known in Greek by the name of Alabastron, from which the material got its name. Older French documents use "marble" and "alabaster" synonymously although the properties of the two stones differ. Alabaster is basically gypsum and cannot be used for out-of-door work as water would gradually make the material disintegrate. It is soft and therefore easily damaged, even though its surface hardens when exposed to air.

The output of alabaster carvings was on the increase during the early part of the fifteenth century, when there was a greater demand for affordable carvings. This was partly due to changing attitudes: private devotion and piety had spread and so had the desire to own holy images. The production of alabaster carvings had become a viable business.[4] For example, in England (at Nottingham, York, Lincoln, Norwich and in Derbyshire), alabaster workshops began to organise themselves to produce serially popular types of holy images. These were often reliefs which were partly gilded or paint finished. It may suffice to describe just a couple of such works to outline the prevailing trend and to point out some features they hold in common.

The first alabaster panel is an *Annunciation with Trinity*. Subject matter and execution are typical of the kind of popular image that might have left any one of a number of workshops situated in and around the region of Nottingham. The panel became the centre of a small altarpiece. The hinged side panels of the wooden encasement show figures of saints. They are of the late fourteenth or early fifteenth century and probably German, which would explain Soest being the altarpiece's supposed place of origin.[5] Many of the English alabaster panels were sold abroad, where they were paint finished, hence the coming together of two traditions.

Those alabasters which were polychromed before they left their workshop were all treated in a similar manner.[6] The colours red, green, gold, brown and some white were painted directly onto the carved image. Blue was more selectively used. The picture ground was frequently grass green and decorated with "daisy heads" consisting of dots (a red dot for the centre and either five or six white ones for the petals). This floral pattern was used in various workshops; it is also found in manuscripts of the period. Nottingham alabasters have an inescapable family likeness, and the *Annunciation with Trinity* belongs to this class of objects.

Although the workmanship of the little altarpiece may not have

satisfied somebody who had seen and could afford better quality work, the iconography and the colour symbolism which evolved from it, and contributed to a difficult theological concept, are quite remarkable.

A lily in a vase stands on the floor with the angel and the Virgin of an Annunciation group on either side. Out of the flower head rises a small cross on which a Christ figure hangs, supported by God the Father, who is shown seated above on his mercy-seat. The cross has grown out of the plant, linking two concepts: undefiled birth and death. The lily and the cross are also united through their colour symbolism: the stem which becomes the cross is green while the figure and the flower of the lily are white. The symbolism of the image speaks of the Alpha and Omega, the beginning and the end. The green stem and tree trunk also relate to the Tree of Jesse and the Tree of Life. Many a crucifix contemporary with this small work also shows the cross painted green.

The second alabaster carving, also a Trinity panel, reveals other important aspects of colour finishing. We turn now to a well-documented master, Hans Multscher of Ulm in south Germany. He carved the panel around 1430 for his patron, Moritz of Schloss Sandizell.[7] It is fully polychromed and still in excellent condition. The angel, God the Father, the dove, the dead Christ, the ground and the backdrop were painted with pastel colours and appear natural. The hair of the God figure is that of an old man, silvery grey, and the flesh of the faces and the body looks soft and real. The painter knew how to blend flesh tints. Perhaps he followed Theophilus's instructions[8] on how to mix colours for flesh tones. The warm, subtly blended tints cover the entire smooth surface of the alabaster and make the crystalline substance appear as if it were flesh or clothes, hair or feathers. The panel has been executed by someone skilled in both sculpture and painting. The carving is delicately done and the colouring adds to the realism, though the subject is treated imaginatively. Again, a single scene (the Deposition or Pietà) merges with and makes visible a theological concept: the Holy Trinity.

Almost nothing is known about Multscher's formative years prior to his move in 1427 to Ulm, where he settled for the next forty years and headed a workshop. However, this small panel alone suggests a familiarity with ideas and styles akin to workshops in Dijon and Tournai. In Burgundy, too, the iconography of a Pietà cum Trinity was already established. Jean Malouel's tondo of *c.* 1400 shows all in one the moment between the deposition and the burial of Jesus with the main characters in place, including God the Father and the dove. In later Trinity images the human aspect of sorrow is left out and the emphasis is on Jesus's reception and union with the Father and the Spirit, as symbolised by the dove.

Around 1425 such a scene, showing God on his mercy-seat with the dead Christ and the dove hovering above his body, was painted, probably by Robert Campin, a Flemish painter also known as the Master of Flémalle. This panel is now in St Petersburg (Hermitage). At about the same time as Multscher produced his *Holy Trinity* panel (1430/40), the Flemish master may have painted a triptych (a three-part altarpiece) of which one side panel is still extant (Städel Museum, Frankfurt). It shows a Holy Trinity group with an upright Christ in grisaille, thus emulating a sculptural group of that subject. This panel is of interest not only because of its subject matter and possible link with our Swabian master, but also because it introduces us to another feature: the interrelationship between painting and sculpture. Leaving aside for the moment the Multscher panel, the painted sculptures as found in numerous Flemish altarpieces deserve special attention.

In composition and colouring the Trinity painted by the Master of Flémalle clearly represents a stone carving. His pupil, the painter Roger van der Weyden, who trained between 1427 and 1432 in Tournai, a sculptural centre, also made use of this artistic device of emulating monochrome sculptures in his altarpieces, thus adopting a northern concept already introduced by the van Eyck brothers in their Ghent Altarpiece (1400). We know from documents that Roger van der Weyden also polychromed sculptures. Grisaille paintings of sculpture and polychrome sculptural pieces appear side by side during the fifteenth century. Only in a late Gothic work, a painted altarpiece by the south German painter Marx Reichlich (1506)[9] do we encounter the representation of polychrome sculptures within a large painting. Here we have clear examples of the cross-fertilisation of ideas through the close collaboration between sculptors and painters.

To return to the Multscher panel in the Liebieghaus in Frankfurt, there it is part of a collection of alabaster carvings. A series of figures of the Rimini Altarpiece (*c.* 1430). by an unknown Flemish or French master appears entirely monochrome; perhaps they never were painted. Alabaster workshops did not necessarily do the polychroming themselves, as we have already noted, but sold works "unfinished", taking into consideration their clients' taste and purse.

This may have been the case when Abbot Jean du Clerq of St Vaast of Arras bought in 1432 twelve apostles and other figures for a retable showing the *Crowning of the Virgin Mary*. The abbot employed the painter Jacques Daret, who had a wooden encasement and panels made for the purchased figures, which he then painted. Three years later, in 1435, delegates attending the peace conference at Arras came to admire the

completed work. The niches of the polychromed figures were decorated with gold brocade while the baldachin above the figure of the Virgin was blue with golden stars, representing heaven. Regional variations and workshop practices obviously play their part. Fine brush marks of gold paint were often applied in order either to underline stylistic features or, perhaps more importantly, give the assembled retable a coherence which otherwise would have been lacking. On a large number of devotional carved images red, green and blue were the dominant colours.

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Around the year 1460 another cluster of events reveals a pattern of cultural and social interactions which sets the scene for the pre-Reformation period. For this we need to turn to yet another material: wood. The wood carvings produced during the second half of the fifteenth century will take us once more into the interior of churches which were richly decorated with polychromed statues of saints and altarpieces.

Eighty per cent of all the altarpieces were made during the period from 1460 to the beginning of the Reformation. After about 1460 there were therefore great demands placed on sculptors and polychromers. However, by 1500 both crafts had overreached their capacity. The excessive production of images led to tension among the two trades. All the crafts were organised in trade corporations, the guilds, which often imposed strict rules. One of their functions was quality control.

Being led by events, we shall travel from north to south – that is, from Strasbourg to Nuremberg and Tyrol. The names we shall encounter will have a familiar ring and the works to which we are drawn are well documented. Several of these have been restored in recent times. We shall rely on what is known about medieval workshop practice.

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Polychromy as a cultural phenomenon entered a crucial phase. While in one respect it was at the height of artistic fulfilment, in another it had reached not so much its limits as an artistic expression but rather its acceptability during a politically and socially turbulent time. Our first example, the *Madonna of Dangolsheim*, probably originated in Strasbourg around 1460 but was removed from there during the Reformation. Stylistically it is attributed to Nicolaus Gerhaert of Leyden, who was active in Strasbourg at that time, according to a contract for the epitaph of Canon Busnang for the cathedral (1464).[10]

Carved from a single log of walnut, the statue belongs to the tradition of "beautiful Madonnas" first recognised as a style around 1400. That developed into a fuller, more mature style effected by the volume of the dress and the manner in which the mother holds her child.[11] When in 1984/7 the statue was thoroughly examined and restored, it was noted that it had been polychromed thrice. During the second half of the seventeenth century the sculpture was restored and the original colour scheme adjusted to the prevailing Baroque taste. Probably at the beginning of the nineteenth century it was again restored. This time even less note was taken of its former colouring. More recently restorers have been able to establish some of the initial intentions as regards the work's appearance and effect. They noticed that the carving on, for example, the locks of the child was rather more detailed and of better quality than previously thought. As a result of finding out more about the carving technique used, the statue may be attributed to Nicolaus Gerhaert of Leyden rather than just to an Upper Rhenish workshop.

The statue was hollowed out at the back and made into a repository for a relic which has never been touched since placing it there. It was carefully sealed in by a thin board, fine linen and gesso (a chalky ground which also covered most of the figure). On about a third of the surface hemp was applied to remedy minor faults or damage done to the wood. The chalk layer on top of the linen was painted with bole (reddish clay or earth) before any gold and silver application was made. Between some of the folds and the back of the figure *zwischgold* was used instead of pure gold leaf in order to limit the cost.

The outside of the Virgin's mantle was covered with lustrous gold over a bole ground. The reason for using bole (which may vary from red to ochre) as an undercolour is that the colour comes through the thin gold application and thus affects the appearance of gold – it can be made to look darker or lighter, redder or more yellow. It allows the painter to present various kinds of fabric in gold and to differentiate between the items or layers of clothing. Finally, by painting over the gilding with a coloured glaze, the lustre could be modified as and where appropriate or – as in the case of silver application – it gave the necessary protection against oxidation.

In this instance the colour values of the first polychromy applied to the statue were for the dress as follows: the lining of the sleeves was in red and the fabric of the dress in blue and gold in imitation of brocade. Over a layer of azurite, mixed with a little lead white and some oil or egg-white, a raised repeat pattern was stamped into the gilding, its main motif being a tendril or shoot which covered an area of 127 x 85 mm. The grey-white

(silver?) veil of the figure is very smooth. The figure was given a red belt, painted twice over; firstly with madder and then with cinnabar. The one visible shoe is black. The crown is of wood and after preparation was covered in gold. Today the figure is without her crown, which was removed when it was restored for the first time.

For the flesh colour, tints of light pink were worked into a smooth, porcelain-like finish which had its own lustre. The eyes of Mary and her infant were very similar: white-grey for the eyeball, grey-blue encircled with black for the iris, and black for the pupil. The upper lids were outlined in dark brown while the eyebrows were drawn in with delicate dark brown lines. The mouth was first painted light pink, then finished with dark red. The hair of both mother and child was gilded and kept light in tone with the help of the yellow bole and reddish-yellow varnish.

The original polychromy was applied with the greatest care; even the most inaccessible places, such as the recesses of the folds, were worked to a high finish. When during the Baroque period the statue was restored, a heavier chalk ground was applied, thus obscuring the delicately carved surface. The gold was removed from inside and outside the mantle with a scraper, leaving the chalky ground intact. With the exception of the brocade dress, the veil and the flesh, several layers of thick chalk were applied all over which then were carefully smoothed – something which was not done during the first polychromy. As already noted, the fresh gesso spoiled the precise profiles and the modelling. The finer details were now lost. The entire mantle, upper part and lining, was covered in red bole prior to being gilded. The imitation of the brocade of the dress was left as it was. The base of the statue was given a red floor and brown sides. Hair and flesh tones were also modified. The hair must have appeared shades darker as the gold leaf were laid over a red-brown bole. The light pink and reddish cheeks were directly painted over the original colouring without any preparation. The subtle effect of the first polychromy was now lost. However, worse was to come for the third polychromy hardly related to what was there before as the painting was done directly over the existing colouring. This time the gold and silver application was omitted.

The outer and inner parts of the mantle were painted blue; the dress and the lining of the sleeves were coloured red without much differentiation; the shoe, too, changed from black to red except for some black outlines. The base was covered entirely in green. The veil remained white, but hair and flesh were all made several shades darker: dark brown for hair and eyebrows and a dark pink for the skin. The eyes also changed their colour as the iris was painted grey-green.

The colouring and the technique employed were the determining

factors for fixing the date of the third polychromy, which is thought to have been applied at the beginning of the nineteenth century. Historically all three polychrome treatments are of importance as they provide comparable material for pigments and their preparations, also regarding colour values and the techniques employed and, not least, the intentions that emerged. Why, for instance, were gold and silver finally omitted? Was it a matter of cost, taste or ideology, symbolism or realism? We need only consider how our perception of an image such as the present one changes when seeing her without the crown. From being shown as the heavenly queen she now is perceived as Mary, the mother, and with the removal of the precious metals as an ordinary woman among women. These visually perceptible shifts are signs of the time; they reveal undercurrents of thoughts and they direct us plainly towards some eminent changes in the intellectual history to which these images have contributed. Let us therefore take a closer look at one or two types of statue that underpinned the preaching and moralising during the late fifteenth century.

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The statues singled out for closer examination are limewood carvings of female saints which were produced within two generations of sculptors and, more importantly, within the same ambience that established Ulm as an artistic centre during the late Middle Ages. Hans Multscher, whom we have already met and who is today recognised as one of the leading sculptors of the fifteenth century in southern Germany, carved a figure of Mary Magdalene. Her left hand with her attribute, possibly a jar of ointment, is missing.[12] Carved almost in the round, the statue, which is just short of 1 metre tall, once had a fixed position in a sanctuary. Now, like many "dislocated" statues, the figure belongs to a museum (Liebieghaus, Frankfurt) which provides a different context for viewing holy images. The statue is a late work (*c.* 1465), carved two years short of the sculptor's death in 1467.

The painted surface is only partly preserved and it has lost much of its former freshness and glow.[13] The subdued and somewhat worn colouring conveys a quite different, more realistic and down-to-earth impression of a female saint than it did when first painted. Now we are more aware of the modelling and what it contributes to the expression, and we are not disappointed. The *Magdalene* we see is a fine carving of a sensitively portrayed mature woman. She is shown in a contemplative mood, serene and reflecting an inner beauty. She is the Mary on whom the gospel focuses in the Resurrection story, not the sinner and penitant. She is

dressed in keeping with someone who has means. Her (formerly) gilded hair is held in place by coloured bands. Her kerchief was initially white and so was her cloak, which had broad gold trimmings and a blue lining. The gown was once silver with a coloured brocade pattern, and trimmed with a wide gold band. The robe was shown with a blue lining. The bodice is still covered by a light blue colour, and a golden belt suggests the waist where her right hand rests, holding together some folds of her garment, which is red. Considering the statue as a whole, the amount of red is moderate and kept in check; Mary Magdalene is sometimes represented wearing a red dress, the colour of passion.[14]

Nearly five decades later Gregor Erhart (d. 1540), also of Ulm, was quite explicit about which aspect of the character of the sinner–saint he had in mind when he carved a beautiful female, with her long auburn hair covering most of her figure but providing tantalising glimpses of her nude body. The original colour application of the *Mary Magdalene* now in the Louvre is still in a good enough condition for us to appreciate the intended impact of the two most prominent shades, which contribute to the symbolism and the allusion to the fallen woman cleansed of sin and made "whiter than snow". Her body colour is near white. The exposed wood of the figure's feet, which comes close to the flesh colour of a living person, reinforces that impression. Yet the colour of her loosened hair and her sensous forms point to her reprehensible nature. Art is selective, and often so is the reading and preaching of the gospel where it says "that anyone who looks at a woman lustfully has already committed adultery with her in his heart".[15] Erhart and his contemporaries were perhaps less concerned with the theological implication of their subject matter and more with humanistic ideals. Still, religious art was soon severely censored for introducing images and values that betrayed double standards.

We remain with the Erhart workshop, where much talent passed through or "remained in the family". The sculptor Hans Daucher and the painter Hans Holbein the Elder were both related to the Erharts. Michel Erhart, the father of Gregor, was also a sculptor. During his career he produced three versions of the *Virgin of Mercy*.[16] It is the so-called Ravensburger group (*c.* 1480) that exemplifies the style and quality of late fifteenth-century south German limewood carving.

The group was probably made to stand by itself and was not part of an altarpiece, as was thought at one time when a misleading epithet was also used in relation to Erhart's work.[17] The composition of the Virgin and the ten men and women who take shelter under her mantle of mercy was fully modelled and painted at the back, which suggests that she was intended to be seen in the round as an isolated figure. The bright and luminous colours

have largely survived the passing of time and it is possible to appreciate the care with which the polychromy was handled.

The gold application on the Virgin's dress shines like a torch into the darkness of the world from whence the people she is sheltering have escaped and who have gathered around her, a pillar of steadfastness. In a graceful gesture she opens her mantle and makes it into a tent for their protection. The upwards thrust of the flutings of her dress is continued by her tubular neck and her oval face. Her hair and the draping of her scarf across her bust provide a frame for her portrait. Her gaze is directed towards the onlooker, inviting all to come and take refuge. Beside the gilt and flesh colouring, which makes up the central column, the bright colours of her mantle and scarf are toned down by the pattern simulating costly fabrics. The inside of her mantle is of cornflower blue, the outside appears green (?), still showing some of its former flower pattern.[18] Her veil has a white pattern on a light brown and red ground. The group of people, male and female, wear differently coloured dresses according to the fashion of the time; red, green and white dominate. The ground they stand on is grass green. The hair and the flesh colour of Mary and those under her cloak appear natural. The carving and the colouring blend and complement; nothing seems out of place. Even the smaller scale of the figures agrees with the concept of magnitude portrayed.

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An altarpiece is a much larger unit, usually combining several elements of a gospel narrative or of the life of a saint into one whole. The combination and variation of images display local or individual preferences.

The Herlin Altarpiece (1466) is a very large late Gothic construction which has plenty of traceries, sculpted figures and painted panels. Some decades ago the altarpiece was taken apart to be examined and restored. In 1970 the findings and conclusions were published. The work was named after its painter and presents a juncture between Flemish and southern ideals and practices.

The painted panels of the Herlin Altarpiece, showing the life of Mary, are similar in style to the Columba Altarpiece by Roger van der Weyden. In conception the Herlin Altarpiece is however rooted in a south German tradition which favoured the combination of sculpture and painting, while Flemish altarpieces often were just painted. Another important distinction between these two regions is the choice of wood. Oak and walnut trees were more common further north, and hence used also for carvings, while in southern Germany limewood was more common. For small-scale work boxwood was often favoured, being of a finer grain.

Whether Friedrich Herlin polychromed the figures also, as was customary within the trade, was left unconfirmed by the 1970 report, which also expressed uncertainties about whether Nicolaus Gerhaert of Leyden produced all the carvings. Naming the painter but not the sculptor was not unusual during an age when a painter's work was often more highly rated than that of a sculptor. While there is no certainty about his share of the work in this instance, we do know who was responsible for the joinery of the shrine. The Nördlinger master joiner Hans Waidenlich signed the contract for this big and complex structure,[19] which required a large and well-organised workshop.

This is not the only example of where a joiner's name is recorded, for he would sign for the labour involved in both the constructional and the sculptural elements of a wooden altarpiece, even where a hired sculptor of the calibre of Nicolaus of Leyden may have taken part. In 1466 the Constance master joiner Haiden employed Nicolaus Gerhaert to carve the figures of the now lost altarpiece for Constance Cathedral, but it was Haiden's signature that mattered. Nicolaus of Leyden was on the move, having sojourned to Strasbourg, then done important work in Rothenburg, Nördlingen, Baden-Baden and Constance, finally reaching Wien-Neustadt, where he settled and worked for the cathedral. He died there in 1473. Stylistically he left his mark wherever he went.

What else is known about the Herlin Altarpiece? Scientifically examined, the colorimetric and chemical analysis of the colours showed that the following colours were used in the painting of the altarpiece: azurite, indigo, green earth, verdigris, madder, vermilion, lead white, chalk and carbon black, besides silver, gold and tin. We note that yellow and violet are absent, as they often were in other contemporary paintings. Whether the Herlin workshop followed certain regulations about which colours may or may not be used is not documented; we do however know that in some places (e.g. Tournai in 1480) which colours may be used was laid down.[20]

For the gilding of the Herlin Altarpiece 5 x 5 cm squares of gold leaf were used, which always slightly overlap. It is therefore not difficult to make out how the gilding was carried out, which areas were covered by gold leaf and where a gold substitute (*zwischgold*) was used. The cost of precious metals determined the actual areas covered by gold leaf. In instances of carved statues in niches, with much hidden from view, there was no point in spending either gold or expensive colours on the entire figure. Pure gold was also sometimes saved on deep folds of garments; there *zwischgold* was employed. Such alternative solutions sometimes led to dishonest practices. When drawing up contracts patrons were careful to

specify the quality of pigments and the amount of gold to be used. Contracts and the quality controlling regulations of guilds were meant to protect prospective clients as well as the reputation of the trade in question. Silver or tin foil, which when painted over with a tinted glaze appeared optically as effective as real gold or silver, was of course materially inferior. Gilding was a skilled job done by a specialist; the gilder however was a craftsman and not of the same pecking order as the painter.

Another matter of interest is what skills were required for the painting and emulation of costly fabrics. Alongside the Strasbourg Manuscript[21] and the *Liber Illuministarum* (Tegernsee manuscript),[22] a work such as the Herlin Altarpiece demonstrates visually the successful outcome of technical instructions.

During the decades between 1460 and 1530 textile imitations in both painting and sculpture reflected a trend in fashion. Silks from the east and other patterned fabrics reached northern Europe via Italy. The Italian painter Cennino Cennini described in *The Craftsman's Handbook* (*c.* 1390)[23] how to design gold brocades in various colours. He referred to flat paintings. However, the Tegernsee manuscript from about the same time (*c.* 1400) went into some detail about how to use tin foil when making a raised pattern and gave the recipe for the paste with which to fill the mould. Different recipes for the paste were known. As for the mould, either a wooden one was used or, if the pattern emulated gold thread, a copper mould was prepared. The restorers of the Herlin Altarpiece described in their report the different techniques that were in evidence on the work under examination. The text includes the following details:

> It is characteristic of the *Herlin Altar* that in the shrine, on the sculptures and on the panel paintings, splendid patterned textiles have been reproduced. It is noteworthy that the patterns, in various techniques, recur every time, not only punched or incised in the gilded background, but also painted on the panel paintings of the inside wings and stamped on brocade imitations in the shrine and on the sculptures. Measurements showed that the repeated patterns are similar down to the finest details and also correspond exactly in dimensions independently of their technique. It is natural to assume a single model for each subject drawing. This hypothesis is supported by the fact that points of a tracing can be found on the pattern of the painted dresses in the panel paintings ... . All techniques described so far have been used directly on the carvings or the panel paintings. There are, however, some polychromed areas in the altar which were made independently and applied as a finished product, as for example the applique relief brocades, with which the altar was extremely richly provided ... . The under-robes of five of the six standing figures also are

> covered with these textile imitations. In total, nine different patterns of various dimensions have been used. The motives of the individual fabric patterns consist of various forms based on pomegranates, scrolls, animals and leaves. These variations cause different dimensions ...

Writing about the moulds, the authors of the report conclude that probably metal was being used; the deciding factor was the grooving of the 10–14 riffles per cm, which is hardly possible in wood. The other interesting feature in that context is that during the manufacture of the mould great importance was attached to the grooves clashing at an angle of about 90 degrees to obtain low- or high-reflecting surfaces, depending on the incidence of light:

> The manufacture of these textile imitations was carried out by a technique which has been passed on in the manuscript from Tegernsee. In this recipe the mass is not pressed directly into the mould, in contrast to other techniques of stamping, but a tin foil is first driven into the deeper parts of the mould. The[n] the grooves are, as usually, filled with the mass. After drying partly, the tin foil is removed from the model and can be applied. In contrast with previous observations the gilding and painting of the relief brocades was not carried out after their application on the sculptures and the shrine, but immediately after the stamping. Only thereafter was the gilded and coloured patterns pasted as tapestries on the prepared surfaces.[24]

The report on the Herlin Altarpiece concluded that the use of techniques discussed belonged more or less to the repertoire of a painter's workshop of the second half of the fifteenth century. It further stated:

> [it did] belong to [the] tradition to play special effects off against each other, e.g. the alternation between glossy and matt surfaces, between dark shining translucent colours and opaque paint. Although this is not really a new technique, contrasts, obtained with particular refinement, are added in the *Herlin Altar* between smooth areas and structured parts. Especially because of this, the polychromy of the altarpiece from Rothenburg can be counted as one of the last culminating achievements in the art of medieval polychromy.

These observations reveal the working method and rationale of a well-run painter's workshop. For example, Master Herlin had a large collection of brocade patterns and textiles on which he based his surface designs. The production of polychrome statues and altarpieces or commemorative and civic sculpture relied on a properly organised set-up, capable craftsmen and reliable patronage which supported a complex trade system with its social interdependence.

Around 1460 liturgical changes favoured the endowment of every

church with a crucifix and an altarpiece, and statues of saints were also on the increase. How important the holy image had become to a community or individuals who as patrons commissioned and paid for such works for devotional purposes may be seen in just one example. By the late fifteenth century the minster of Ulm in south Germany, which was founded in 1377, housed fifty-four altarpieces. Only three remain in place. Between 1460 and 1530 German workshops were in a position not only to meet local demand but also to export. In Nordic countries, for example Sweden, many fine examples of cult images have survived and of these quite a few were produced in north Germany.

A number of cities across Europe became centres for the production of and trading in works of art. In these places fairs were organised to which rich merchants came from all over, and from whence they took their precious gains to places as far away as the Baltic, Venice, Prague and London. The cities which made a name for themselves on account of the works of art produced there and had them shipped abroad are, in the north, Brussels, Antwerp and Bruges. Their master craftsmen were particularly concerned that a high standard should be maintained and they therefore adopted a system by which every piece of work was given a distinctive trademark. For the first time the polychrome finish of sculpture was stamped, guaranteeing the use of the best material, pigments and precious metals, as well as the craftsmanship invested in the art object. The painters of Brussels chose the name of their city as their trademark by setting the bold letter "B" within a square cartouche. At Mechelen, a centre for polychroming, the capital letter "M" began to appear on products. Workshops began to feel the pressure of competition and the demands made on them to produce ever more elaborate works of art.

The temptation for individuals to make short cuts and increase their profit also existed in the making and trading of holy images. Guilds were set up to ensure that honest practices prevailed. They safeguarded the standard set for each trade and oversaw the training of craftsmen. As regulatory bodies they also supervised the purchase of imported materials and stipulated the type of work a craftsman could or should do to avoid conflicts among the trades. Although there was no uniformity either among the guilds or the workshops *per se*, we gain the impression on seeing works of art of that period that similar practices were adhered to across a vast cultural terrain.

The prevailing custom of completing one's training by becoming a journeyman must have acted as a catalyst for new ideas. Skills were acquired or imparted during this time of travelling. The experienced journeyman, if he wished to become a master and set up his own

workshop, had to produce the obligatory masterpiece.

At Strasbourg the regulations of 1516 for the guild of painters laid down that the qualifying master should submit three pieces of work: item 1, an oil painting showing the Virgin Mary; item 2, a crucifix painted in distemper; item 3, a Virgin Mary or "any other small image wearing a robe which is carved. This he has to polychrome and to prepare with bole before gilding and finishing it with glaze and any other [kind of] decoration. It has to be about one elbow high."

Apprentices were already tied into the system by way of a contract and payment to the master by the boy's father. If apprenticed to a painter, he spent much time preparing colours and paint surfaces. Entries in his sketchbook were essential to his career. Each craft had its method of doing things, usually necessitated by the material to be worked in. The sculptor had to know how to select a log, and how to treat and set about carving a figure which may have many folds and undercuts, sweeping movements and, not least, an expression which was fitting for the subject. Wooden figures were carved horizontally in a wood carver's lathe which could be rotated to allow easy access to all parts. The wood carver tried to reduce much of the dead weight by hollowing out the figure from the back or by cutting away from under the folds of the dress. This was important, for even well-seasoned wood tends to swell or shrink depending on the moisture content of the atmosphere in its environment.

After carving, the laborious job of polychroming could begin. It was of course the responsibility of the painter. The wood was sealed with size and patched up where necessary with hemp, before covering it with linen over which layers of gesso were applied. Then all was smoothed down with shaving grass or fish skin before painting it with tinted bole in preparation for either gilding or oil paint. The application of the brocade pattern or the polishing of the gold then followed before finally a coat of varnish or glaze gave the painting depth of colour and the surface extra protection.[25]

Usually the painter received the pieces of sculpture in their raw state and then polychromed them. It was rare for sculptors to paint their own work or, for that matter, the work of other sculptors. It was equally rare that two masters chose to set up shop together. Still, in 1465 Henry the painter and the sculptor John Muenzer of Freiberg in Saxony agreed to run a workshop jointly, share the tools, and in the case of death to have either portion paid out. This seems a very economical and rational thing to do, but only in Italy do we come across contracts in favour of such close collaboration. North of the Alps rivalry between two masters was almost written into the contracts and statutes of the guilds.

Under the umbrellaship of the guilds each trade organised itself into a

self-regulating body. In some regions each guild was a loose confederation between several trades which sometimes seem to have had little in common with regard to the crafts practised. In other areas the guild system resembled more a "closed shop"; newly settled masters were not allowed to join the guild relevant to their trade, but were assigned to another trade body.

In 1427 in Strasbourg quarrels erupted among the members of certain guilds; they complained about the incompetence of associates who made it their business to do jobs for which they were not trained, and they demanded a sharper division between the guilds in order to protect those members who were economically weak. In Zurich it was decided as early as 1430 that no member may join two different guilds. The problem at that time was the increase of image-makers, which lead to sharper business practices. Yet there were masters who clearly were competent in both crafts, wood carving and painting, and have been proved to be so by the completed works that left their workshops (e.g. Multscher, Veit Stoss and Wolfgang Pacher).

Most agreements made between patrons and masters, whether the latter be a sculptor or a painter, mentioned the manner of payment for work done. It was often paid in instalments, beginning with an advance payment to cover some of the initial costs involved. Pure pigments were very costly. Dürer paid 12 florins for 1 ounce of ultramarine when in Antwerp. Sometimes it was the patron who purchased the materials. In some places there existed a local custom according to which the master's wife received a small sum of payment when the commission was completed, or other gratuities in kind were made. The contract sometimes specified the colours to be used or stated that the agreed design may not be altered.

A number of documents suggest that it was the painter who had to provide the drawings even for the sculpture involved, although they were probably the colour sketches to enable the patron to visualise the finished piece. The painter Dieric Aelbrechts of Loewen made a drawing after a statue of a Virgin showing how it was to be polychromed.[26]

Two German masters are of interest: Tilman Riemenschneider of Würzburg and the Swabian Veit Stoss of Horb, who were near contemporaries and produced works of the highest standard. Stoss, who was trained both as a sculptor and as a painter, was even called upon to "complete" an altarpiece carved by Riemenschneider which was left unpainted for twelve years, although one of his own altarpieces was never to be painted following the contract.

Nothing is known of the training of Veit Stoss, the older of the two, who was born around 1445. He acquired citizenship of Nuremberg, which

he gave up in 1476 before moving to Cracow in Poland, although he returned to Nuremberg some thirteen years later and died there around 1533. Riemenschneider was of a younger generation; he was born around 1460 and died in 1531, having experienced the turbulent times of the uprising of the peasants with whom he had sided, which ultimately cost him his livelihood. His training as a sculptor is unrecorded. Both their careers end at the start of the Reformation period.

The work of Tilman Riemenschneider takes us into a new phase with regard to colour in sculpture. His decision to change over to partial colouring or perhaps to full monochromy was probably influenced by Veit Stoss at the end of his career. Riemenschneider was accustomed to working in stone, marble, alabaster and wood. His alabaster figures were only sparingly painted or gilded, allowing the material's own colour to come into its own. For his altarpieces he chose limewood. His earlier wood carvings were finished in the traditional manner by fully polychroming the work. Between 1490 and 1492 he carved an altarpiece for the church of St Mary Magdalene at Münnerstadt. In recent times this work has been examined and the existing pieces restored to their original state. Over a hundred pieces were involved. Two facts were known about it: Riemenschneider never intended to have the work painted, yet in 1504 Veit Stoss was given the job of doing so. In 1650 the altarpiece was repainted. Restorers removed all the colouring, analysed Veit's approach and found his palette in keeping with the period, whereas the seventeenth-century finish was Baroque. What emerged from having the sculpture freed from its layers of gesso and paint was a delicately carved surface which clearly made polychroming redundant. Riemenschneider made full use of texture to compensate for any lack of paint. Until then polychromy was seen as an essential continuation of the creative process.[27] He decided to use his refined technique and skill, complete the process himself and simply to varnish the wood to protect it and tone down the light colour of limewood.

It is not clear why the altarpiece of Münnerstadt was finally polychromed nor why Veit Stoss was contracted. However, as a leading artist himself he was sensitive to Riemenschneider's ideals, for when in 1520 he was given the opportunity to create his last major carving, the Bamberg Altarpiece, he, too, chose to produce a near monochrome work. Only the eyes and lips of the figures were painted with watercolour to accentuate those features. Prior Andreas Stoss, who commissioned his father on behalf of the priory, wrote in to the *anniversarium* of the cloister that "no prior should ever consider to have the altarpiece polychromed".

When about forty years earlier Veit Stoss produced the Marian

Altarpiece at Cracow (1477–89), gold and blue, richly symbolic of the heavenly queen, dominated his work; however the gilding was uniformly polished and any florid treatment avoided. Scholars suggested that Veit Stoss may have known Nicolaus Gerhaert's work, perhaps the altarpiece at the cathedral of Constance, which was in parts monochrome. No proof can be offered, though it does alert us to the fact that monochromy had become an alternative to polychromy.[28]

The altarpiece at Cracow was not polychromed by Stoss. Even so he was quite capable of doing it himself, but he was assisted by a team led by his brother Andreas (and uncle of the prior). The survival of some major works of the late fifteenth century opens our eyes to the high quality achieved by the leading workshops of the time. Close collaboration between those contracted to design, make and finish ever more complex and larger works is quite evident. Two outstanding works must be mentioned in this context for they are still complete; their original polychromy appears in full splendour due to modern restoration work: the altarpieces of St Wolfgang by Michael Pacher and the one in Blaubeuren (near Ulm) by Gregor and Michel Erhart.

Michael Pacher of Tyrol (*c.* 1435–1489) signed a contract in 1471 to produce an altarpiece for the church of St Wolfgang on the lake of Abersee in upper Austria, a commission which took him about ten years to complete. He not only carved but also polychromed the figures and painted the panels of the wings and the predella covering the tomb. From a historical perspective, we have here as complete a work as we can hope for. As a physical object it is well preserved; the content of the contract is known to us (Landesarchiv Linz) and so is the iconography, which affords us an insight into the liturgy and church calendar as well as the lives of some local saints.

The shrine, with its architectural superstructure, contains a sculpted scene of God the Father crowning the Virgin Mary. The Gothic pinnacles which reach upwards from within the box construction become the support for a crucified Christ and statues of saints. Each scene of the painted panels, when opened on high feast-days, leads the view into tectonic space because of the perspective employed, whereas the boxed-in scene of the Crowning of the Virgin happens front stage. The detailed decor and rich gilding act like a hedge which closes off anything beyond, even if it is only imaginary. The statues blend visually into this profusely rich display of tectonic and figurative carvings. When closed, as seen on ordinary days, the four painted scenes of the St Wolfgang Altarpiece dominate. The large rectangular painting, as it has then become, is flanked on either side by a patron saint, St George and St Florian. The Gothic pierced-through

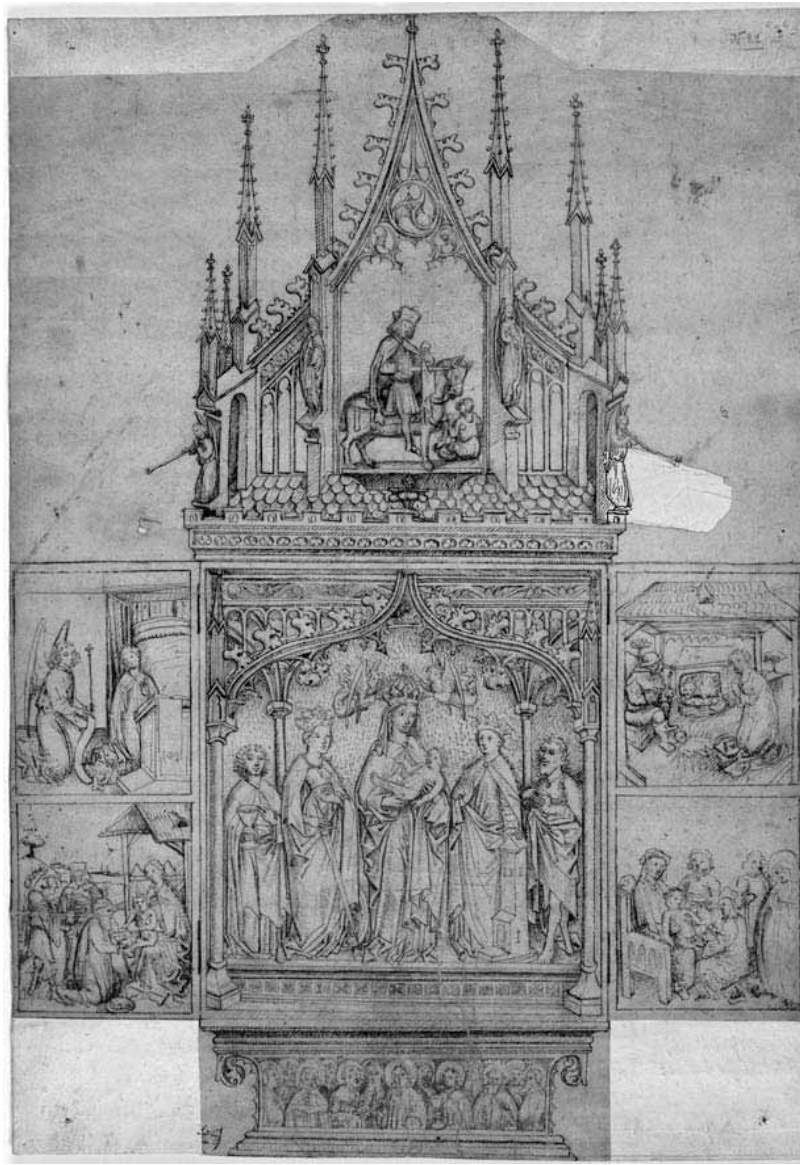

Fig. 6–3 Design by an unknown master for a winged altarpiece, *c.* 1450–80. South German. © Stadtarchiv, Ulm, Germany.

superstructure blends in with other architectural features of the apses of the church as it still allows the natural light from the window to filter through.

The contract states the main subjects and indicates their positions and the wish to have everything gilded and painted in good colours, but it does not go into iconographical detail. Abbot Benedict of Mondsee, the patron, was rather more concerned about the practical side, for which he had to make payments. For instance, the specification for the figures of the patron saints reads: "Item, on the outer sides of the wings should stand St Florian and St George, with flags, silvered and gilded according to need."

Statues like the ones of the two saints reflect an age when the faithful during their time of private devotion were encouraged to contemplate the lives of soldiers in Christ who had overcome the perils of this world. These images were meant to strengthen believers during their own battle with the adversary or to encourage them in adopting a life-style worthy of their Christian calling. Fifteenth-century iconography was representative of a faith which relied more and more on the saint as the intermediary or which commemorated saintly deeds through a widening repertoire of images. The saints were thus shown as role models for emulating their known virtues.

Although Pacher's oevre is rooted in the tradition of the Alpine region, he probably had knowledge of the current expression in southern Germany (Multscher), in the Netherlands (Roger van der Weyden) and in Italy (Mantegna, Donatello in Padua). The network of art production could be a close one, as we have already seen in the case of the Erharts. For example, at some stage Gregor resided and collaborated with his brother-in-law Adolf Daucher, a cabinet-maker, and both assisted Hans Holbein the Elder with his Kaisheim Altarpiece (1502). Gregor's nephew, Hans Daucher, became Augsburg's foremost sculptor in the Renaissance.

*

In the cloister of Blaubeuren there still stands the double-winged altarpiece as set up five hundred years ago. It is described as a major work of the Ulm School; the polychrome limewood carvings are those of Michel and Gregor Erhart. The master responsible for the construction of the altarpiece was Jörg Syrlin the Younger, who also furbished the cloister with carved choir stalls (1469–1474), wall panels and decoration, all in oak. His father, Jörg Syrlin the Elder, had produced the choir stalls for the minster in Ulm. All the oak carvings at both places were left monochrome except for the painted-in eyes and mouths. Dated 1494, the Blaubeuren

Altarpiece belongs therefore to the period when Veit Stoss had just finished his great work in Cracow and Riemenschneider's Münnerstadt Altarpiece was complete but for its polychromy. The Blaubeuren centrepiece is still lavishly gilded, which has the advantage of drawing together the various parts: sculpture and painting as well as decoration. However, blue and red interrupt here and there and so lead towards the polychromy of the statues which, apart from their clothes, were given features and colouring true to nature.

An attempt was made to extend the realism within the two inner side panels (which are in low relief) by creating a natural setting. But by gilding the sky and much of the figures' clothing the final effect runs counter to this concept. As a result we have an irrational scene quite different from the flat panel paintings, where the gilding was further reduced. In the four outermost panels even the sky was given its natural colour and the narrations have pictorial depth and space around the figures and objects. The metamorphosis from the three-dimensional interior of the shrine to the outer spatial flat paintings is subtle and remarkable.

But what was the intention of the medieval sculptors and painters, and not least of the patrons on whom they depended? The product, which in most cases was a cult object, had to satisfy the aesthetic sensibility of the time. The concept of beauty was sustained by two different ideals: firstly, the model of the transcient, heavenly beauty which takes the human soul beyond its material existence; and, secondly, the kind of beauty which is likened to quality. Good material and sound, honest craftsmanship are the basis for the artistic criteria of beauty, whereas religious iconography tried to fulfil the first ideal. In this scheme, symbolism – in particular colour symbolism – was an important factor in bringing the two aesthetic notions together.

Striving after ideals had knit medieval society together; it was through corporate efforts that great cathedrals and altarpieces came into being. The *bauhütte*, or masons' lodge, the workshop, the guild, and not least the church, made it possible for the individual who carried his own ideal within him to excel. Statues of so-called "beautiful Madonnas" – all alike as regards their curved bodies, sweet faces, and gold, blue and white claddings – are (almost) unmistakable with regard to the hands that made them.

But what about an "ideal polychromy"? Can it be defined? Does it have a place in late medieval art? Is it just a concept, or more than that? The suggestion is not unfounded as observations support it and therefore it may offer a working hypothesis. The transition from the Romanesque to the Gothic idea of polychromy takes us through several stages, from full

spectral colouring towards the more selective application of rarer pigments and ever more gold, at first lustrous, then modified and toned down by coloured glazes and rich surface patterns. Gold was to draw together and unify much of the carving. Yet the delicate flesh colour of the figures breaks through the illusory, optical blend of lustre and shades, towards an ever more natural array of hues. Medieval polychrome sculpture is an extraordinary mixture between the elavated and the real. In pursuance of an ideal, the master and his helpers created, in a quite matter-of-fact way, cult objects which were to play their parts in worship. A cult image is forever a reminder of a worthy offering, and to begin with, a gift in its most material form.

One other idea begs the question. Colour in sculpture or sculpted painting? The interrelationship between the two sister arts was never more pronounced then during the late fifteenth century; but which one served, which paraded? From the material point of view painting was as expensive, if not more so, than the carving of statues. Pigments and gold cost dear. Also painting was more labour intensive; each layer, whether gesso, poliment, bole, paint or glaze, required effort and time. Socially too, the painter was in a leading role. It took some outstanding sculptors to produce forms which satisfied fully by themselves without any need of colouring.

Some sculptors may have pressed for a degree of independence either by polychroming their own work or leaving their carvings unpainted. During the pre-Reformation period there had been voices among reforming factions urging the church and congregations to abandon cult images and any form of colourful display, and adopt a simpler form of expression. Riemenschneider was sympathetic towards the peasants and their struggle; was he persuaded by his comrades-in-arms to abandon colour, the display of luxury? Was he substituting the richness of colour for richness of form and texture? His alabaster carvings and metal casts were already sparse in colouring and may have prepared him for this move. Riemenschneider may well have seen how effective monochrome wood carving can be, perhaps when sojourning in Ulm before settling in Würzburg in 1483. The oak choir stalls in the minster of Ulm were already in place (1469–1474). The figurative carvings above the choir stalls were minimally painted; just the eyes and the mouths were given some colours, or the initials on phylacteries were singled out in red and here and there a carved brooch was gilded. Oak carvings, which were often kept plain, were hitherto a feature of northern German lands, yet here in the south too they knew how to let the material speak for itself. This was made manifest in small-scale sculpture where the choice of boxwood and pearwood, and

Fig. 6–4 *Garden of love*, Loy Hering (1484/85-1554). Solnhofer stone relief (*c*. 1525); h. 23.4 cm x w. 20.8 cm. Inv. no.: 5942. © bpk / Skulpturensammlung und Museum für Byzantin-ische Kunst, SMB / Jörg Anders.

also Solnhofer stone, was more often than not kept monochrome. All three materials have a very dense, fine grain which in skilled hands was transformed into the most delicate objects of art showing great detail, texture and complexity. These small images, particularly the reliefs, remind us of the wood engraver's art, the monochrome image. The sculptor succeeded in adding "colour" to his medium, not by using the brush but his knife or chisel. Surface modulation and realistic expression gave character to his work, which formerly was achieved only by adding showy pigments. In this respect the sculptor gained emancipation from painting. But by abandoning polychromy he also abandoned colour symbolism. This was a decisive step, for it meant that the image-maker had to find other means of expressing spiritual values. He discovered Christ in humanity through the realism of the human face; indeed the invisible God became at last truly visible in art.

Together with the medieval journeymen, we have been travelling along the roads which took us to important workshops and to churches where major works were displayed, some dazzling in their virtuosity. In the stillness of a private chapel the traveller perhaps sensed the piety and the desire to come to terms with a faith which contains all: exultation and poverty, sin and redemption. It was a restless time he lived in. Social reforms were fought for in some parts of the land he had travelled and

successfully negotiated in others. Lifted up by the beauty of a work of art or comforted while pondering over a religious image, the traveller stepped into the market square where more cult objects were on display, this time for sale to merchants from all parts of Christendom.

Reflecting on where the journey has taken us, we note that we have been following a network, and have made contact with craftsmen well-grounded in their various crafts – indeed, some of them were truly gifted artists.

Fig. 6–5 *Smiling Boy*, *from the train of the Saved* by the "Naumburger Meister". Mainz, Germany. © Bischöfliches Dom- und Diözesan Museum. © Photo: Bernd Schermuly.

Notes

[1] E.J.M. Spargo (St Bonaventure NY: Franciscan Institute 1953), *The Category of the Aesthetics in St Bonaventure*, p. 117.
[2] C.A. Stothard died in 1821 aged 34, while at Fontevraud studying Gothic monuments.
[3] "Selected from our Cathedrals and Churches, for the purpose of bringing together and preserving correct representations of the best historical illustrations extant, from the Norman Conquest to the reign of Henry VIII. Dedicated to the Prince Regent".
[4] In Roman times centres such as Aphrodisias traded commercially in popular marble sculptures.
[5] A193-1946, known as the Soest alabaster panel.
[6] The Victoria and Albert Museum collection makes this abundantly clear.
[7] Near Ingolstadt. The panel is an exhibit at the Liebieghaus, Frankfurt am Main.
[8] See Chapter 5.
[9] See Alte Pinakothek, Munich.
[10] Michael Baxandall thought the statue to be Upper Rhenish.
[11] The earlier "beautiful Madonnas" tend to curve more as the hip supports the weight of the infant.
[12] Alabaster jar (Multscher's *Mary Magdalene*).
[13] cf. the Rottweil Mary Magdalene (*c*. 1450).
[14] Susan Haskins, *Mary Magdalen: Myth and metaphor* (London: HarperCollins 1993).
[15] Matthew 5:28.
[16] Gemäldegalerie, Berlin.
[17] The "Ravensburg Madonna", a work by Michel Erhart, was formerly attributed to Friedrich Schramm of Ravensburg.
[18] Sections of her robe have been repainted to "blend in" with the existing polychromy.
[19] Its dimensions are h. 460 cm, x l. 320 cm, x w. 50 cm.
[20] Hans Huth (Darmstadt: Wissenschaftliche Buchgesellschaft 1967), p. 97, no. 109.
[21] This was a medieval painters' handbook (MS A VI 19), now destroyed. A transcript was made for and published by Sir Charles Eastlake in 1847.
[22] In *c.* 1500 the librarian of the Tegernsee Cloister edited the largest late medieval collection of recipes for scribes and artists. The manuscript (Cgm 821) is now in the Bayerische Staatsbibliothek, Munich.
[23] Original title *Il Libro dell' Arte.*
[24] *Studies in Conservation* 15 (1970).
[25] In Hamburg there was a rule that any work which had polished gold and was intended for places in the marshlands must be given a coat of varnish (Huth, p. 62).
[26] Huth, p. 95, no. 84.
[27] See *Zum Frühwerk Tilman Riemenschneiders: Eine Dokumentation*, eds. Bodo Buczynski, Peter Bloch*, et al.* (Regensburg: Friedrich Puster 1982), p. 7.
[28] Michael Baxandall, "Veit Stoss, ein Bildhauer in Nürnberg" in *Veit Stoss in Nürnberg: Werke des Meisters und seiner Schule in Nürnberg und Umgebung*, ed. Rainer Kahsnitz (München: Deutscher Kunstverlag 1983). from 1490 onward.

CHAPTER SEVEN

EARLY COLOUR SYMBOLISM AND COLOUR THEORIES

Colours are the veils of the divine primeval light.[1]

Colour is perceived as a natural phenomenon. It holds an important place in people's lives. It is an experience, and it informs our experience. The ancient Egyptians understood colour as being of essence to the character[2] of a living creature,[3] as the development of the meaning of the word for "colour" (*iwn*) shows, for it also meant "character". Everything has its characteristic colouring, is recognisable through it and may be classified by it – at least in the natural world or where a system– such as colour symbolism – has been devised for that very purpose. Colour in man-made objects is largely a matter of choice, because it is the colour of the material that presents itself in the first instance but which may be regarded as inappropriate to the invented form and its purpose. The designer or maker may therefore wish to cover up and overrule the natural colouring of the material employed in favour of a more suitable colour, or colours, with which to convey his overall intention. What his intention is in respect of his colour choice depends on the purpose of his work, the meaning it is to convey or the scheme of which it is part, whether materially or ideologically. While colour has truth value, particularly when seen in a classificatory context, certain colour values are sometimes perceived as being ambiguous, for they do not fit into an appropriate class or match past perceptual experiences. Also, colour values are open to manipulation, whereby they assist in an intention to transcend a given value or truth system. Often it is in this realm that sculpture becomes the carrier of a chosen colour scheme.

Colour has many aspects. The physical and chemical aspects of colour have their reality in nature, and so has perception, the faculty with which the observer is enabled to discern the visual phenomenon of colour. Perceiving colour is related to experience, and therefore subjective and unique to each person. The subject relies entirely on his ability to respond to colour stimuli, to match those against previous colour experiences and,

not least, to communicate those through an acquired colour code or language.

The proper place of colour has repeatedly been questioned. Does colour belong to the object or to the subject? The persons most deprived of colour perception are the ones born blind, who may be justified in claiming that colour does not exist, not for them in any case, although because of colour language they know it must have meaning to the sighted. Much has been written about colour and its various aspects, explanations have been sought and many reasons given for why we relate to colour as we do.

Polychrome sculpture affords us a particular point of entry into the complex issue of colour phenomena. As already noted, colour may be regarded as optional in sculpture – that is, as long as there are no particular cultural or aesthetic needs to be fulfilled (e.g. colour symbolism) which determine the way colour in sculpture is resolved. Art historians and their publishers have in the past given little heed to colour when discussing and illustrating sculpture, and thus gave the impression that sculpture is a monochrome art form, and that it is on a flat surface (canvas or wall) that shades bring meaning to a designated area which is then referred to as a painting. Yet the function of the sculpted form is twofold. On the one hand it can stand on its own due to the choice of substance of which it is made. On the other hand this shaped substance may serve as a carrier of applied colour, just like a flat wall, and so acquire a double function: form *and* colour combined now express meaning.[4]

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Colour theory and colour symbolism are two separate issues. However, they are discussed here together because during the early history of colour no clear distinction with regard to their usage can be made. Basically, a theory explains a natural phenomenon such as colour. It also provides a framework that serves to widen existing knowledge, which may lead to the description of natural laws concerning the behaviour of certain phenomena.[5]

With colour symbolism a set of rules is adopted which is considered appropriate for a circumscribed purpose. These rules will have to be observed whenever the occasion arises for which they have been designed. Colour symbolism works only if the canon, the abstracted colour code, is understood and adhered to. It has a comparative time span. A society may outgrow the code's usefulness; hence in the history of art there are different sets of colour symbolism that originated in different cultures or during different eras.

Colour symbolism functions at a certain level of associative thinking. Colour theory, on the other hand, requires a different mind-set, for it takes its clues from close observations made under certain conditions. There are six major aspects which contribute to the richness and diversity of the study of colour theory: the natural phenomenon of colour (physics), the substance of colour (chemistry), the nature of colour (physiology), the effect or impact of colour on a person (psychology), the place of colour in the system of knowledge (ontology), and colour as an object of beauty (aesthetics).[6] The various colour theories were developed relatively late, if compared with what is known about the history of colour symbolism. Although we look to the fifth century BC in Greece for some insight into early four-colour theories, Egyptian colour symbolism seems to suggest that the idea of a particular set of four colours was universal but attended to differently; the Egyptians related their perception of colour to symbolism and applied this more or less rigorously to all socio-religious aspects of life. The Greeks however seemed to have been interested rather more in explaining and relating colours to cosmic or natural systems.

Precise colour observations on which a theory might have been based were made by the ancient Babylonians, who discerned the different colours on oil films and those of the rainbow and stars, and who diagnosed illnesses by observing the patient's colouring. The seven colours that seem to feature in the cosmo-religious cult of the Babylonians do not exactly match those of either oil films or the rainbow (white, yellow, scarlet, purple, green, ultramarine and black), but they make up a set of their own, for these colours were selected and arranged in order to represent a hierarchical order. These could be, as it were, read off the walls of the Tower of Babel, a construction designed to reach heaven itself. Each of its seven tiers apparently had its own colour: white, black, red, blue, orange, silver and finally gold that touched the sky.[7]

Another ancient monument, the seven circular walls of Ekbatan in Persia, to which Herodotus refers in his *Histories* (I, 98), was given the same set of colours. In both instances the seven shades did not match the order displayed in either the rainbow or on the oil surface, but they reflected an ideal based on the cosmos. In symbolism the established meaning transcends observable phenomena, thus presenting a new order, a hierarchy of values. So we must take note of what is there and what is not there; gold and silver have nothing to do with rainbow colours and green is conspicuously missing in this scheme. The two different sets of seven colours alert us to the fact that colour symbolism has a function different from empirical colour observation and matching. Through colour symbolism notions and values may be demonstrated to exist which

otherwise would have no visual index (e.g. divinity, hierarchy, renewal).

In Akkadian texts there are numerous references to the colour green, which supports the fact that it played its part in the everyday life of ancient Mesopotamia, while perhaps it was given no place in their colour symbolism. The Tower of Babel was of cosmic-religious significance and the colours adopted symbolised that order. Could it have been that cult figures, too, were coloured according to this scheme of colour which omitted green but included gold and silver, and all the other colours mentioned? There are, as far as it can be ascertained, no traces of green on any of the extant cult figures, which in any case are rather few and often fragmented. On the whole, Babylonian and Assyrian art appears biased towards the warm colours, although among their cultural material green dyes, pigments and stones have been found. Still, the issue here is not whether the ancient Mesopotamians used the colour green at all but whether green played any part with regard to their cultic ideals and related colour symbolism. It is interesting that several seated figures of Gudea (2143–2124 BC), the ruler of Lagash, were carved in a greenish stone (diorite) with, seemingly, no further added colour. The polished surface usually carries an incised inscription. Gudea, a foreign ruler, may have adhered to different cultic ideals from those of the people under his lordship. Whether the green- or black-coloured stone of his many statues carried any particular meaning is (as yet) unknown.

The archaeologist Astrid Nunn collated and tabulated all the traceable colours found on official buildings which have been excavated in the Near East. It transpired that the colour green hardly featured. Where green pigments or glazes were noted, this was mostly on buildings which belonged to cultures other than Babylonian or Assyrian – for example, Persian, Syrian or Anatolian. She, and before her Robert Koldewey, took the presence of green glaze on a Babylonian palace as a case of colour transmutation.[8] Red glazes can change chemically into the colour green.[9] Nunn also referred to Assyrian orthostats, or upright slabs of stone, many of which are housed in the British Museum. She recorded red, black and ochre and questioned whether the reliefs were ever fully painted. Even if part monochrome, the colour green seems not to fit into the general scheme of decoration. Nunn commented on the fact that the Persians used colours differently from the Mesopotamians. This may be said also of other societies. Most people express a noted colour preference or dislike. The colour red, although regarded in most cultures as a positive shade, played an ambivalent role in ancient Egypt. It was associated with the struggle for power, bloodshed and violence. Colour symbolism may provide a means of openly declaring a particular predisposition towards

social attitudes or political intentions.

The (apparent) absence of green in ancient Mesopotamian cult figures invites comparison with finds of sculptures from Syria and Egypt which show clearly that their eyes were painted green, probably with a paste of malachite, which was believed to have a protective medico-magical function. In fact, the items with green eye paint came from the same cultural background as paintings in which Nunn recorded the use of green pigments – that is, from neighbouring societies rather than from Babylonia and Assyria.

An earlier people from southern Mesopotamian, the Sumerians, used materials which had strong colour values and combined these into polychrome images of lapis lazuli, gold, silver, shell and bone; or applied the four basic colours, black from bitumen, white chalk and red and yellow earth colours, to clay figures. We may cautiously speculate which colours may have been used and what the intention was when applying this or omitting that colour. Although we may never know the true situation, we cannot shut our eyes to the possibilities; any shift in colour pattern must also signal a shift in cultural values.

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There are probably few societies which have not related to colour symbolically. The ancient Egyptians were perhaps the first to develop a complete colour code which enabled them to order their percepts and to construe a plausible picture of the world they lived in and of their religious experiences. Thus, from the Fourth Dynasty onwards (*c.* 2620 BC) a fairly strict colour code gave coherence to a complicated religious system, at first without the colour blue. (Blue was not added before the Fifth Dynasty.) The colour symbolism adopted embraced a hierarchical ordering based on religio-social ideals. The king, by representing his god, also received a deistic colour attribute, the blue beard.

Nature is subtle and profuse. For humans colour provides a means with which to order and to classify. They observe that in nature certain categories of object correspond to a set of colours and that the number of basic colour values included may be reduced to four. The ancient Egyptians referred to sets of four colour values in conjunction with certain cultic rituals, as for instance in the “beating of the heifers”, for which a black, white, red and multi-coloured heifer was selected. Another ritual, the “presentation of the cloths”, comprises the four chromatic shades red, blue, yellow and green. When in their art the Egyptians referred to all the nations, they represented these by four men – black, white, red and yellow

– and thus displayed a concept fundamental to our perception of mankind.

These were not just abstract ideas. Nature and natural processes confirm the underlying principle that four equates with completeness. Animal husbandry provided just one instance where a correlation between colour and number could be observed and an insight gained into how nature distributes colour within a generic class. In the two pyro-crafts, metal work and pottery, similar observations may be made where a process, or transmutation, visibly demonstrates the relationship between *calore* and *colore*, with black, red, yellow and white as indicators of the degree of heat involved.

The early Egyptian colour code[10] exhibits a fundamental understanding of the colour phenomenon and its place within a holistic order of things, for it comprises the visible and the invisible, percepts and imagination. While the Egyptians were obviously perceptive and had fully grasped the classificatory aspect of colour, they seemed not to have been overtly interested in scientific theories or speculative thinking, as the Greeks were later. Their colour code was designed largely for the liturgist and also for the artist who had to give visible credence to an order by which society abided. Observance rather than observation was probably the basis of Egyptian art, although where applicable, as in hieroglyphic writing and the related art of the polychrome relief, they applied local colours that essentially matched those of natural objects.

Coloured low reliefs relate more closely to paintings then they do to sculpture in the round which, too, was conceived of as coloured images. Our perception and appreciation of colour differs in respect to either medium; even so, Egyptian statuary was painted according to the same canon and complied with the rules laid down for painting. The reason for this is not easily definable; however it seems that there are two factors involved. Firstly, in comparison with single-figure sculpture, narrative painting displays a greater chromatic density as more is happening on the flat picture surface. In large-scale sculpture colour, if applied, may be perceived as being "spaced out" as the onlooker is unable to see all the colours at once. Secondly, deities are associated with a unique symbolic colour at any time.

The Egyptian sculptor often selected a material which corresponded with the underlying colour symbolism of the subject to be represented. Statues of Ptah are invariably of a dark material; so are those of Osiris when associated with the netherworld, while perhaps green stones were deemed suitable for imaging him as a god of renewal. The falcon Horus is as a rule made of gold, in keeping with his epitaph "the golden one". The Egyptians represented their gods in the colours by which they were

known. To know somebody by his colour was their way of thinking about character. It was a characteristic of Osiris to renew himself, like nature. The potency of this image is made clear in the custom of preparing a seed bed in the shape of Osiris and awaiting its verdant growth.

For colour symbolism to work two basic requirements have to be fulfilled. Firstly, the chosen colour has to evoke a strong colour idea by its association with something that always is of that colour. As a colour constant it evokes colour memory. Secondly, the object or situation to which the shade is now applied must not normally be the carrier of this colour. The context within which the colour is taken up and displayed as being of symbolic significance must be explicit to all concerned. Cult images, more than any other objects, are laden with symbolic meaning, not least owing to the colour given to them. But of course the colour associated with a sculpted image does not necessarily have to have symbolic connotations, for colour may also relate to realistic features or quite simply comply with a decorative scheme.

During their long history the ancient Egyptians were remarkably constant in the way they represented life and after-life. Yet there were moments when the canonical ties were loosened or manipulated, and used for political ends. For a short while, during the Eighteenth Dynasty, the rigour of old formulae was eased under the influence of a new religious cult and world view. During Akhenaton's short-lived Amarna period (1367–1350 BC), a tendency towards naturalism created a much freer art. The cult of Aton struck at the heart of the old polytheistic order which kept control over society and its creative forces. Under his dynamic kingship true polychromy became possible in faience owing to the introduction of cobalt and lead antimonite as new colorants in glaze.[11] Faience is mostly found on funerary sculpture where the coloured inlays, in imitation of precious stones, gave the gold masks and encasements of mummies their extraordinary beauty and serenity.

About a hundred years earlier Queen Hatshepsut (1490–1468 BC) gradually created an image of herself as pharaoh to comply with the role model of the king. As a female she could not succeed to the throne – yet she did, applying cunning and deception. It was perhaps the first transvestite act ever recorded, for she was represented with a darker skin than was accorded to her as a female. She also began to wear the blue pharaonic beard and she was shown with a flattened chest, all done by degrees over a period of time. The existing strict canon forced upon her this rather strange game by which her character visibly changed.

Egyptian art of the Eighteenth and Nineteenth Dynasties shows that it was possible to develop taste and state one's colour preferences. The

Egyptologist Hermann Kees noted that the colour white in dress was increasingly preferred as it expressed an ideal of purity and taste. And the Oxford scholar John Baines observed a colour shift during the thirteenth century BC when entire tombs were less chromatic, applying black or white or yellow or some red and very occasionally blue. When finally the Egyptians came under the influence of the Greco-Roman world their hierarchical order crumbled and with it the canon which had supported their ideology for over two and a half thousand years.

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We need to turn to ancient Greece to discover how colour theories entered history. The Pythagoreans (sixth century BC) thought that the surface of things was identical with colour and therefore belonged to the objective world. Did they think of pigments and dyes when drawing this conclusion? Empedocles (492–431 BC) introduced optics into colour theory; he claimed that colour was perceived by the eye and related to certain particles in the eye with which the percepts mixed. He may have been the first, according to Theophrastus,[12] to name white, black, red and yellow as the four basic colours and relate those to the four elements – white to fire and black to water, and presumably red to air and yellow to earth, although the last two are not mentioned.[13] Democritus (460–360 BC) explained how he thought the mixing actually occurred in the eye, and thereby presented a physico-mechanical theory of colour wherein atoms played their part. In his model red is related to heat. Besides the four-colour theory a simple black and white theory was also in currency which claimed that black is contained in white and vice versa, likening it to water and snow. The black–white concept was taken up by Aristotle when he developed his ideas on colour. But Plato (428–347 BC), his teacher, first introduced another novel idea: in *Timaeus* he cites a number of hues achievable by mixing. At first there are the four basic colours, he states, white, black and red as well as "lustre", which is obtained by "mixing red and white into yellow".[14] From these colours eight more may be obtained by mixing the basic ones.[15] Two further ideas which also preoccupied later colorists need to be singled out: their particular interest in purple and also in colour generally as an element of beauty, as set out in Plato's *Aesthetics*.

Aristotle (384–322 BC) was essentially committed to the black and white colour theory, but he was nevertheless greatly interested in the various colour phenomena and studied the physical, organic and chemical properties of colour. He went to some lengths to analyse and explain the

significance of how in plants black and white may become green or yellow by the presence, or lack of, nourishment through water. Green is obtained by the admixture of yellow to black. However, Aristotle also studied the rainbow and deduced from the presence of light (white) and water (black)[16] that white and black relate to all other colours. But it was Aristotle's commentator Alexander of Aphrodisias who reasoned that the immaterial, unmixed colours of the bow could not be rendered by material mixture.[17]

The twentieth-century physicist K.J.A. Halbertsma noted as follows:

> [Aristotle] held that colour was what is seen in light; the limit of transparency in bodies is therefore colour. That which is transparent is visible because of a colour which belongs to another body. Colour is potentially present in bodies and is made actual by the effect of light. He assumes two main colours: the light (white) and the dark (black); as the result of mixing or by the presence of more or less of these simple colours all the other colours are produced. Aristotle, however, went further than any earlier colour theorist for he ordered all the basic colours by arranging these on a scale, the first model of its kind.

Even this very brief account of what the earliest colour theories stood for shows that the various aspects of colour (physical, chemical, physiological, ontological, psychological and aesthetic) always furthered their own and neglected any other aspects. Even in the twenty-first century colour is still approached through one or the other, but rarely through the entire spectrum of knowability.

Were the Greek sculptors in any way indebted to these early colour theories? Archaic Greek statuary was painted and the colours used were red, black-blue, yellow-ochre and white. Green and blue colours were traced on the patterns of dresses worn by the *korai*. We need to ask if it was coincidental that the sculptor-painter employed a set of colours that corresponded with those referred to in the colour theories put forward by Empedocles and Democritus.

To begin with, the colour theories contain little more than what, in practical terms, the craftsman was able to find out for himself.[18] He knew as much about the physical and chemical state of colours as did the natural philosopher. As a metal worker the sculptor experienced red heat and would have observed many more colours that the process of heating and forging metal teaches the worker: black, red, yellow and white show the state the metal is in. But he would also have been aware of the emotional response to a colour such as red; it is warm, cheery and exciting. Red, the most dominant colour, symbolises life and emits the very heat of blood.[19]

Lustre or sheen, the concern of Flavius Philostratus (*fl*. 220 AD, born on the island of Lemno), was achieved in sculpture by polishing the stone or metal. He reasoned that atoms were responsible for light and shade because of the way they were thought to be arranged – that is, in a stepped-up scale whereby the light would fall at right angles and not cast a shadow. The sculptor who worked with rough and smooth surfaces and observed the way light was falling and shadows were cast may have come to the same conclusion. How to mix a colour with which to capture lustre was, no doubt, of greater interest to the painter who tried to emulate in his painting substances such as gold or bronze. But there is more to it, as Philostratus, and also Theophrastus, tried to demonstrate. It is the forms, arrangement and position of atoms that, in effect, are responsible for the colour in matter. The atoms that give out white were thus supposed to be smooth and round, and those relating to black had to have irregular forms and rough surfaces and be arranged unevenly. Thus it follows that smooth atoms not only relate to whiteness but also to brightness and lustre, as achievable when polishing metal by rubbing the surface until the atoms join up into a smooth and dense skin that reflects the light. They also relate to transparency.[20] [21] The idea of brightness was discussed in *De Coloribus*, where Theophrastus expounded Aristotle's colour theory. In Chapter 3[22] he states that brightness is the concentration of light. He also explains as follows:

> when gold or copper is rubbed its pores are broken at the surface, the dye in them is dissipated and the particles which are rubbed off are seen to have the irreal colour, black. The colour of the lump can be restored by polishing, for this causes the dye in the pores to form one smooth surface with particles of the metal.[23] [24]

The painter and the sculptor do not necessarily look at colour in the same way as they consider its contribution to their respective works. The one uses his colours on a flat surface and creates "thing-ness" and space, with the intention of making the scene resemble the tangible world. With his available colour values he tries to capture light and shade, invents pictorial depth and imitates the substances that appertain to the objects he is painting. The other uses colours on his statues as if putting on make-up or a dress. His concern with regard to light and shade differs as any nuances of shade are already determined by the modelling of the statue or relief. Polish and matt finishes, applied local colours, added materials for effect – these are his options for making a colourful image, yet we know from art history that it pays to employ a skilled painter to polychrome sculpture. Praxiteles highly praised the art of Nikias, who painted the former's statues.

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Three works of art may suffice to show how polychromy developed during the course of just over two hundred years. The frieze on the Siphinian Treasury of Delphi (*c.* 525 BC) represents the high point of Archaic decorative sculpture, of which John Boardman wrote "With colour and the many metal additions of weapons and jewellery it must have resembled more a large glittering casket."[25] Traces of the original paints have survived: the background of the frieze is either of a dark or a lighter blue; red was more amply used than yellow, orange and green, which also contributed to the decorative scheme. Whether black and white were present remains open. The range of chromatic colours may surprise in view of the first four-colour theory of Empedocles presented some fifty years later.

At the beginning of the Hellenistic period a mosaic based on a painting and a polychrome sarcophagus show what could be achieved with the four basic colours as proposed by Empedocles and with a palette that related to Aristotle's rainbow colours. The Alexander Mosaic found at Pompeii is based on a Greek painting of *c.* 300 BC. The vivid portrayal of a battle scene is composed with black, white, red and yellow, and some traces of green.[26] The effect is quite dramatic. Gnosis, the creator of the pebble mosaic from Pella in Macedonia (late fourth century BC), composed his picture mainly with the natural hues of pebbles, which accounts for the "austere" colour effect of the image. All the figures had been fully modelled.

The art historian Ada Cohen commented on the four-colour palette in her study of the Alexander Mosaic, and cited a number of Greek painters who had adopted the four-colour scheme, Zeuxis and Apelles being most widely known by name. She mentioned the following:

> actual remains of ancient painting from Macedonia have recently come to show that the four-colour restriction known from literature, whatever its appearance, was one of the potential choices. The contrast between the *Alexander Mosaic* and the vivid polychromy of the *Alexander Sarcophagus*, chronologically so close to the model of the *Alexander Mosaic*, had already shown this a long time ago in regard to the medium of sculpture. If we take into account that a polychrome palette was available in the fourth century and that the "austere" four-colour palette may have been fashionable in the fifth century, then our original of the *Alexander Mosaic* (c 320 BC) would appear old-fashioned for its date.[27]

It is quite possible that the natural philosophers stimulated discussions about colour and perhaps encouraged artists to experiment with colours. Plato, Aristotle and Theophrastus wrote down their theories; Aristotle's text was lost but Theophrastus's *Peri Chromaton*[28] became widely known.

During the third century BC polychrome Tanagra figurines may have popularised a taste for pastel colours. The small terracottas were painted in shades of yellow, light blue and pink, and perhaps gold, over a white slip that covered the brick-coloured material. These lighter shades were achieved in the first instance by mixing white and any basic chromatic colour, and also by adding new tints to the palette.

The Tanagra workshops of Corinth used the pink of rose madder, which is really a dye, and mixed it with white chalk when employed as a paint. The root is indigenous to Greece. As a pigment wild madder (*Rubia peregrini*) was found on a marble basin dated between 320 and 280 BC[29] and it was recently analysed by X-ray diffraction. Two other rare pigments, a slightly pale yellow (jarosite) and a blue (Egyptian blue), were also found on this classical marble basin. Lumps of madder lake have been recovered in Corinth among the debris during excavation and dated to 146 BC. It is interesting that these particular shades became available not long after Aristotle had developed his colour theory and after it had become widely known. The chemist Earle R. Caley[30] reminds us as follows:

> in contrast to modern technological practice comparatively few pigments were in use, and of these only a small proportion were prepared by any chemical process. This indicates the primitive state of chemical technology in ancient Greece. On the other hand, certain of the pigments used there in ancient times are still among the most widely used and valued of all pigments, notably white lead and the iron ochres.

So far we have considered the ancient colour theories in relationship to painted marble and terracotta sculptures. Before dismissing bronzes as unlikely candidates on which to demonstrate such theories, it may be worth looking at the Riace statues (460–450 BC). Empedocles's four basic colours are all there. The yellow of the bronze, the copper-red lips and nipples, the silvery-white teeth and eyeballs and the black pupils add up to what his theory required, or what an empiricist took for granted.

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If we accept the possibility that Aristotle's and Theophrastus's colour theories had any direct practical consequences for art, we need to go one step further and state what these were. Two developments became

feasible: firstly, the chromatic range of colours was extended and more fully applied and, secondly, black and white came into their own as colour values and in sculpture found their expression also in "colorism".[31] The usefulness of the four-colour theory with regard to polychrome sculpture thus came to an end, although in practice it remained a valid point of reference.

Pliny the Elder (AD 23–79) summarised for future generations the importance of separating the chromatic and achromatic colours. He was not an original thinker of the stature of Plato and Aristotle, yet the accumulated knowledge on which he based his *Natural History* is still of immense value to us. In his volume on art (Book 35, section 30) he distinguishes between the *colores austeri* and the *colores floridi*, the austere and the bright colours. He remarked at one point that *colores austeri* were used in ancient painting before *colores floridi* "deflowered" the art of painting with too much mixing. What precisely he meant by this is not clear. Modern scholars have come to different conclusions about what he may have had in mind. On the one hand he may have wanted to make a distinction between two sets of colours, one being bright and luminous (yellow, green, red, blue), the other sombre, as described above in connection with the Pella Mosaic (black, white, red, yellow).[32] Another interpretation was given by the art historian W. Lepik-Kopaczyuska,[33] who suggested that the two different palettes probably refer to (opaque) body colour and to (transparent) glazes. The latter produce lustre, which would tie in with the atomistic concept expounded by Philostratus[34] when he introduced the principle of colour distribution which focuses on light and shadow, and who explained colours in terms of light. Where there is light, there is shadow. He agreed with Aristotle's idea that colour is not essential to images, saying that the colourless pictures are to be regarded as paintings for they too represent similitude, form, intellect, and emotion.[35]

Light and shade in modelling presented sculptors with the biggest challenge. Colour, essential to the portrayal of life, was eliminated, or more precisely its chromatic values were excluded and the two most contrastive shades, light and dark, were made to interact fully and become visually vibrant. The whiteness of the marble and the hollows, undercuts, modulations, and polished and rough surfaces suggest ways of seeing by relying on colour associations and colour memory.

By the beginning of the third century Roman sculptors of marble sarcophagi began to work in a new style which produced strong alternation between light and dark. The coloristic effect of the deep-cut crowded reliefs corresponded with the notion that "black and white contained all

other shades". Through drilling and heavy undercutting the material was opened up and the forms were freed, allowing light and dark and the many nuances of grey shades to liven up the composition. In portraiture actual colouring of eyes through painting or inlays was abandoned, showing instead the iris with a bean-shaped segment removed but leaving proud a dot or two to suggest a high-light.[36] [37]

The Romans did not contribute anything further to the theory of colour, although they tested the principle of colorism, which enriched their art of portraiture with a realism unknown before. However, they were perceptive to colour and its symbolic connotations, as may be seen in their liking for polylithic sculpture.[38]

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The importance which the colour purple gained during the Roman Empire may help us to appreciate how a colour acquires symbolic status. The purple dye of the Murex snail from Thyrene and the rare porphyry stone quarried in Egypt had great aesthetic appeal and were acquired at considerable cost on account of their rarity. During biblical times purple was highly rated. As the dye and the stone were in foreign hands the Romans gained free access to this wealth only after the expansion of their empire.

Porphyry is a very hard stone and difficult to cut, but because of its colour it had become emblematic of the imperial household and was used for the decoration of imperial palaces and for some public monuments. The tetrarchic group of the Emperor Diocletian and his co-rulers (*c.* 284–305 AD) was carved in porphyry. With the collapse of the Roman Empire the supply of porphyry also came to an end. During subsequent periods many of the valuable coloured stones were retrieved from derelict sites and recut by medieval or Renaissance craftsmen.

Another purplish stone, *rosso antico*, was considered equal to porphyry because of its symbolic colour. One of the most memorable sculptures carved in this stone is the *Drunken Faun* (second century AD).[39] The colour symbolism in this instance has a mythological connotation with the cult of Bacchus.

Closely associated with cult statues were the two colour values of red and gold. During the early days of Rome, the statue of Jupiter Capitolinus was annually repainted with red. Why this had become a custom the Romans themselves had forgotten. However, applying red to cult objects was then not uncommon; in fact, this practice included grave objects which were painted in the warm, glowing colour that spoke of the power of life.

Gold was likened to the sun as it has radiance and seems to shine forever. Many images of gods, set up in their honour, were of this precious material and the symbolism was well understood. The Emperor Claudius (first century AD) forbade that "anyone should worship him or sacrifice to him. At first he accepted only one portrait, and that merely of silver, and two statues, one of bronze and one of stone, which were voted to him."[40] However, when Domitian became emperor, "he permitted no statues to be set up in his honour unless they were of gold and silver and were of a certified weight".[41] He himself was no shining example to the Romans for he suffered a *damnatio memoriae* after his death; all of his statues were either defaced or destroyed.

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The Romans, we have noted, were not engaged in advancing any colour theory of their own. However, the early Christian thinkers developed further the concept of light which the Greeks had already embraced. Light as the source of colour quality and beauty took centre stage throughout the Middle Ages, not only in relationship to colour theory but also to colour symbolism. Christian theology set out to cover all aspects of existence; thus natural philosophy became to some extend subservient to the church and her teachings. Still, the science of optics was able to develop and began to contribute to the theory of colour.

St Augustine's thoughts about light influenced the thinking of many generations, although his own were shaped by his earlier contacts with non-Christian beliefs. He wrote that "colour is not substance but a light-dependent quality of substance". Light is therefore the queen of colours. St Augustine also introduced a moral issue concerning colour. In his *Confessions* he remarked that, while the eye loves lustrous and pleasing colour, we have to guard ourselves from being tempted by colour. Nearly three centuries later Isidore of Seville (d. 636 AD) reiterated the notion of colour being potentially harmful, for while it may elate it may also seduce. He echoed, in some respect, Plutarch (*d. c.* 125 AD) who had commented on the deceptive effect colour may have. During the twelfth century concern about profuse colour possibly leading the faithful astray was also expressed by Bernard of Clairvaux, who would not permit any extraneous colour in his Cistercian foundations.[42] On the other hand, Hildegard of Bingen (1098–1179)[43] presented a quite different vision of colour. The German scholar Ernst Benz[44] wrote of her:

> a visionary who has recorded probably the most striking descriptions of visions in colour. … Precisely through the colourfulness of her visions she

> already inspired the contemporary recorders of her manuscripts to produce coloured miniatures, which adhere exactly to the colour details of her visions.

Her colour symbolism relates to the gospel of salvation (*Heilsgeschichte*); therefore white and black express good and evil; red and green are her two other main colours central to the narration and visualising of the Christian gospel.

Throughout the Middle Ages these chromoclastic tendencies were present while profound religious experiences found expression through colour, form and light. The Venerable Bede (672–735) considered colour essential to form as only colour can express form. Would he have disagreed on that subject with his near contemporary, Isidore of Seville, had they both stood in front of the cult statues of St Foy[45] or of St Géraud, as Bernard of Chartres and his friend Bernier did later when discussing the merits of the golden statue of St Géraud?[46] While we need not detain ourselves over such a hypothetical notion, we must look to the practitioner of art and establish where he gets his colour ideas from.

In the first instance it is the natural world which suggests ways of doing things; secondly, the artist draws on his imagination when creating new, unfamiliar things. The art historian F. Haeberlein[47] suggested four sources which supplied the medieval imagination with colour ideas: firstly, courtly ceremonies displaying colours of triumph (e.g. purple). Secondly, early Christendom and the clothing worn in everyday life. Thirdly, scriptures and apocryphal writings; these colours relate closest to the colour idea of medieval religious art. Fourthly, the description of the eternal city, the Civitas Dei, which implies that there are hierarchical values attached to materials. Another German scholar, G. Haupt,[48] qualified what Haeberlein had already indicated about substances and their values by saying that "not without reason are there attached to precious stones and metals a deep symbolic [meaning] which also includes colour symbolism. With these substances the symbolic value is extremely high."[49]

During the Carolingian period sculptural objects were on the increase again after a low ebb in sculpture-making. Many of these were produced by goldsmiths for they were mostly reliquaries of anthropomorphic shapes, like the statue of St Foy, or they were architectural models of sanctuaries. They were made of precious and colourful materials which were chosen because they had lustre and brilliance; their colours glowed and radiated light. Light and substance were one. The idea of precious materials and light was presented in the book of Revelation (21:18–21). In reality these objects demonstrated the view held that all things were pervaded by light

and reflected light. God's creation is but a reflection (*Abglanz*) of his being. In this respect gold linked the physical with the metaphysical realm because of the associated idea of light and incorruptibility. Colours give out lumen and precious materials such as gold, jewels and crystal reflect light through lustre. Coloured polishable materials were used where affordable as pigments were considered inferior and thought of as a mere substitute for such materials.

Closely associated with light, and also with purity, is the colour white. The brighter and purer white is, the more light it reflects. The white garments of the early saints symbolised several related concepts: purity, innocence and sanctity. In painted sculpture white as a symbolic colour did not come into its own until the Baroque period, when white poliment and gilding exemplified sainthood. White marble, alabaster and ivory were, during the late fourteenth century, more frequently used as the material equivalent to whiteness. However, only a colourful or contrastive setting would affirm the intended colour symbolism.

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Only a limited number of colour values were accorded symbolic status during medieval times, as was the case in other cultures. We recall that the Egyptians used four different shades during certain cultic rituals. The ancient Israelites, too, attached great significance to a set of colours, as prescribed in the Old Testament. The hangings and covers of the tabernacle were of white, purple, blue and scarlet and so was the ephod, the four-coloured belt. The historian Josephus thought that these colours either related to the four elements (earth, fire, water, air) or to the four virtues.

The church, too, depended on a colour order to which she could attach a didactic function. White was biblically affirmed, purple remained a power symbol that suited the growing hierarchical church, and gold was a symbol of the absolute.[50] It was not until the twelfth century however that the liturgical colours were regularised. Pope Innocent III declared white, red, green and black to be colour symbols. The inclusion of green rather than blue is interesting. He remarked at one point that "green is between white, red and black", perhaps meaning that hope must go with innocence, passion and death. During the Middle Ages the colour green was singled out as a colour "more beautiful than red". Hugo of St Victor liked green because it recalled the awakening of spring. William of Auvergne (d. 1249) had a preference for green, too. He also observed that white widens the eye (pupil) and black draws it together.

The colour blue relates to the heavenly sphere and hence became important with the rising cult of the Virgin Mary, the queen of heaven. The background of reliefs was often painted blue from Archaic Greek times, less frequently so in medieval reliefs where gold often provided the background – although twelfth- to fifteenth-century ivory diptychs and triptychs often have a blue background. With the inclusion of black in the liturgical canon the church acknowledged and symbolised the darker side of existence, yet during the Dark Ages sacred art made hardly any use of black, for it was perceived as the negation of all colours and an expression of unbelief and sin. Even polychrome crucifixes of the Romanesque period still glowed in chromatic colours as they conveyed the image of the risen Christ on the cross.

During the Middle Ages it was bright and vivid hues as well as lustre and light that contributed to beauty and goodness. Hence, sculpture was robed in spectral colours or covered in burnished gold or silver, and set with sparkling precious stones. Beauty had not only aesthetic but also moral value, always drawing the attention of the onlooker towards heavenly beauty.

The *Golden Madonna* of Essen (*c.* 980)[51] has a wooden core which was entirely covered in gold and enamel and precious stones. The seated figure does not represent a mother with a baby, but symbolises the Mother with the Christ Child. Haupt wrote that it is not without reason that an intense symbolism had attached itself especially to precious metals and stones. In these materials the symbolic value is immense. But even more important for our understanding of how the medieval symbolism was arrived at is his observation that "there is a way which leads from natural colour to colour typology and then to colour symbolism. It is this way which is fundamental for explaining the meaning of symbolism."[52]

A late example of medieval colour symbolism is the Marienaltar by Veit Stoss, who carved and had painted this work for the Marienkirche of Cracow (1477–89). The central panel, the Death and Ascension of the Virgin Mary, is predominantly in gold and blue, symbolising heaven, whereas the disciples are cloaked in their assigned colours. The lavish application of gold and its own lustre created an abundance of softly glowing light when lit by the candles from below. The fifteenth-century theologian and metaphysicist Nicolaus Cusanus stated that lustre appears in light and colour, and Veit Stoss superbly demonstrated his point in this work. But soon neither colour nor gold was tolerated on sculpture, at least not in Protestant countries where chromoclasm had cancelled the need for colour symbolism or where a new taste for monochrome sculpture made itself felt.

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Two important issues, early colour theories and colour symbolism, directed our enquiry into polychrome sculpture. We noted that colour symbolism depends on some form of carrier, and sculpture is, in this respect, an obvious choice besides flat painting and the body of a person. We concluded that colour symbolism has a longer history than colour theory. The latter, for which the Greeks were mainly responsible, began to be developed from the fifth century BC onwards – although the two older cultures of Babylon and Egypt may in their diverse ways have contributed to the growing body of knowledge regarding colour theory which began to preoccupy the Greeks and the medieval period. There was, it appears, a kinship of thought between the Mesopotamians and the Greeks, who approached the colour problem in a similar, quasi-scientific manner, either by making precise observations and relating these casuistically rather than universally, or by trying to explain various concepts such as origin, relationships, numbers, scale, light and shade, and chroma. Polychrome sculpture seems, in the first instance, to have been unaffected by such ideas, although we came to realise that the distinction Pliny made between the *colores austeri* and the *colores floridi* (dark and chromatic palette rather than opaque and translucent colours) may also be made in Greek sculpture, the Riace statues and the Alexander Sarcophagus being two probable examples.

Colour symbolism depends on, and can contribute to, the stability of a society; it is, in contrast to fashion and other short-lived trends, preserving the status quo of a cult or an ideology. Cult images, too, uphold ideals with the help of colour symbolism, however unconditionally. In ancient Egypt colour was a means through which religious ideals were expressed as each colour symbol gave character to what otherwise belonged to the non-sensory realm. Similarly in Christian art, colour symbolism added a further dimension to the physical presentation of an event or person by enabling the onlooker to associate that which was made visible with that which is and remains invisible.

The several aspects of colour theory as known today were until more recent times ill understood. However, as the different colour theories of the ancient and medieval periods show, they were perceived as being part of a much larger pattern and explained with this in mind. Determining the proper place of colour in the system of knowledge presented the biggest challenge to early philosophers. But to the person who handled coloured substances, the alchemist and of course the artist, the problem was rather how to obtain a consistent colour quality and how to fix it permanently.

No doubt this was relevant to polychrome sculpture, although we must not assume that the practitioner was guided by anything more than simple recipes and instructions. Experience was by far his best teacher. For instance, how in classical Greece the method of applying wax over the painted surface (*ganosis*) was arrived at and developed is not known, yet we read for what reason it should be done: to prevent the light of either the moon or sun from leaching out the colour. This is practical knowledge demonstrated by practical means.

Medieval painters were drawn especially to one aspect of colour theory, namely to the idea of colour being an object of beauty. While a certain colour (green) may be perceived as being beautiful, it also may be endowed with symbolic meaning (eternity); in this respect both issues, colour theory and colour symbolism, have some bearing on medieval aesthetics and thus also on colour in sculpture. Aesthetics (which in medieval times was not a separate discipline) touched various aspects of life. The concept of beauty was, as we have already seen, closely related to the concept of good, although this idea was not endorsed by everybody for there were voices (Tertullian, Bernard of Clairvaux) who claimed that colour in art can deceive and therefore also corrupt. In any case, the ostentatious display of gold, jewels or expensive colours was contrary to the teaching of Christian values, which embrace poverty as an ideal; besides, cult images, however beautiful, were really idols and should not be condoned.

Image-free worship as commanded by the Mosaic Law and heavenly beauty as alluded to in the book of Revelation were the two incompatible ideals between which the medieval age swayed. Light and colour were but reflections of what is to be, to which already expression could be given through such resources as were available. The theology of the image is more complicated. It took the best of medieval scholarship to establish a plausible defence against the iconoclasts. In essence, the justification for allowing images into the church rests on the belief that God assumed human form, visible, sensible and vulnerable to the touch of men who laid hands on their own God in order to kill. Central to the story is a human being, and it is this man who is shown in the various narratives or scenes for the sake of the illiterate as much as for those who need to be reminded of the colourful events of the gospels. Colour brought back to life and into the presence that which is believed to have once happened, and lifted the drama above all ordinary events through colour symbolism and the ideal of beauty.[53]

Notes

[1] Adolf Portmann, "Colour sense and the meaning of colour from a biologist's point of view", in *Color Symbolism,* Eranos Yearbook, 1972 (Dallas: Spring Publications 1977).

[2] Hermann Kees, "Farbensymbolik in ägyptischen religiösen Texten", in *Nachrichten von der Akademie der Wissenschaften in Göttingen* (Göttingen: Vandenhoek & Ruprecht 1943), pp. 413–479. See also Hermann Grapow, *Vergleiche und andere Bildliche Ausdrücke* (Leipzig: Hinrichs 1920), p. 106.

[3] Kees uses "Lebewesen"; however, the idea of character refers usually to the gods who were given their individual characteristic colour – e.g. Ptah was assigned the colour black; Horus, gold.

[4] Most studies on colour take painting, not sculpture, as their point of reference when discussing colour iconography or colour symbolism. Colour is the natural medium of painting, whereas in sculpture it is the material which is of essence, although colour may claim parity where polychromy is concerned. To most people sculpture is first and foremost form, then material, and lastly colour, although the order may be reversed in painted reliefs because of their tableaux-like presentation. When looking at a sculpted image we see not only with our eyes but with our mind, which expects certain things or characteristics but not others. Polychromy plays an ambivalent role in art; sometimes it is there in full splendour, impressive and telling. At other times the colour present is of the material, revealing quality; it is not referring to substances that are in the subject but not in the object. Were this the case colour would contribute to the illusory nature of the object (e.g. a painted dress refers to the colour as well as the fabric of such a dress as represented, but if the colour is used symbolically, it refers to whatever the colour stands for).

[5] The abstract of Gunnar Tonnquist's article, "The principles of colour systems", in *Die Farbe*, Vol. 19 (1970), no. 1/6, summarises what such a theory might involve: "Even if colour is a perception and can be described and systematized as such the technology of producing the stimuli of the colour perceptions involves many physical, chemical and technical problems. We must therefore acknowledge the interest of those professionally engaged in these fields of colour to define and systematize colour and coloured materials from their aspects".

[6] Thomas Lersch, "Farbenlehre", in *RDK*, Vol. 7, col. 273/274. (http://rdk-web.de).

[7] See Chapter 1.

[8] See Robert Koldewey, *Das wieder entstehende Babylon* (Leipzig: Hinrichs 1990), 5th edition, p. 115. He writes: "The colours white, light blue, yellow and red are set against dark blue; also they are outlined with a black filament. The red colour appears today entirely as green. Where this kind of glaze is thicker – for instance where formed into drops – we find the core is still of a luminous red but has become encased by a green layer. This change of surface colour, we must assume, is the result of transformation over time. We have also found several larger pieces of red glaze, broken up during antiquity, on which the same change was observable; the green outer layer was universally 2–3 mm thick, sufficient to hide the original red colour of the brick and therefore to cover up its former

appearance. This is important because it shows that opaque red, with its distinctive colour value from the time of its manufacture, became problematic during recent centuries, whereas translucent glaze remained unproblematic. One must not underestimate the colour sense of the ancient Babylonians, who liked the beautiful red and would never do without it. We can imagine a lion with red hair, but not with green."

[9] Blue pigments have also been found to change sometimes into green.

[10] Egyptian colour symbolism, see Richard Wilkinson, *Symbol and Magic in Egyptian Art* (London: Thames & Hudson 1994), Chapter 6; *Kees*; John Baines, "Color terminology and color classification: ancient Egyptian color terminology and polychromy", in *American Anthropologist*, New Series, Vol. 87, no. 2 (June 1985), pp. 282–297.

[11] See Jehane Ragai, "Colour: Its significance and production in ancient Egypt", in *Endeavour*, New Series, Vol. 1, no. 2, 74 pp.

[12] Theophrastus, *De sensu et sensibilibus*.

[13] cf. Thomas Lersch, "Farbenlehre", in *RDK*, vol. 7, col. 273/274. (http://rdk-web.de).

[14] Ibid., col. 159; "In his *Timaeus* Plato mentions four basic colours – white, black and red as well as shiny, which when mixed with red and white becomes yellow. From these basic colours a further eight may be made by mixing."

[15] It is difficult to see what prompted him to include "lustre" and above all its odd composition. Perhaps he had gold in mind, for which he tried to find an equivalent in paint, a problem that Alberti later encountered. We may not know much about what led to these early colour theories, and may only surmise what they hoped to prove.

[16] cf. Aristotle, "Minor works", *Aristotle: On colours*, ed. W.S. Hett (Cambridge MA: Harvard University Press 1936), p. 23.

[17] cf. John Gage (London: Thames & Hudson 1995), *Colour and Culture*, p. 108.

[18] Empirical knowledge.

[19] In Jewish culture the ritual slaughter requires examination of the lungs of animals to establish whether they are kosher by looking for the inherent four colours: yellow, white, black and pink (flesh colour). See Oskar Rabinowicz, *Einleitung in die Probleme des rituellen Schlachtens* (Vienna: W. Glanz 1937).

[20] Diels, p. 377; W. Kranz, "Die ältesten Farbenlehren der Griechen", in *Zeitschrift für Klassische Philologie* (1912/67r), p. 131.

[21] For lustre and transparency see the four-colour theory as expounded by Wilhelmina Lepik-Kopaczyuska, "Colores floridi und austeri in der antiken Malerei", in *JdDAI* (1957), Vol. 72/73.

[22] Theophrastus, *De Coloribus*, 793a16.

[23] H.B. Gottschalk, "The *De Coloribus* and its author", in *Hermes*, 92 (1964), p. 67.

[24] Modern physics is able to measure reflected light; thus we know the precise value of light reflection. Silver scores highest, relating closely to whiteness; cf. Karl Bühler, *Die Erscheinungsweisen der Farben* (Jena: G. Fisher 1922).

[25] John Boardman, *Greek Sculpture: The archaic period – a handbook* (London: Thames and Hudson 1978 and 1991), p. 159.
[26] With green being a "middle-value", was there a physiological reason why the touches of green were added – as if to help the eye to adjust to the middle value on the scale?
[27] Ada Cohen, *Art in the Era of Alexander the Great: Paradigms of manhood and their cultural traditions* (Cambridge: CUP 2010).
[28] Also known by its translated title *On Colours.*
[29] See Arie Wallert, "Unusual pigments on a Greek marble basin", in *Studies in Conservation* 40 (1995), pp. 177–188. The basin is an exhibit in the J. Paul Getty Museum (85.AA. 107).
[30] Earle R. Caley, "Ancient Greek pigments ", in *Journal of Chemical Education 23*, 1946), p. 316.
[31] See Chapter 1.
[32] Vincent J. Bruno, *Form and Colour in Greek Painting* (London: Thames & Hudson 1977), Chapter 4 ("Greek colour sensitivity").
[33] cf. Lepik-Kopaczyuska.
[34] Ibid., p. 9.
[35] cf. Philostratus, *The Life of Apollonius of Tyana, With an English translation by F.C. Conybeare* (after 217). Book 2, p. 177.
[36] See the eyes of the bust of Commodus as Heracles in the Capitoline Museum, Rome. Carrara marble, Roman artwork from 191/192 AD.
[37] The concept of colorism in sculpture is only applicable to white material such as marble or ivory. Black stone sculpture probably has its equivalent in the contrast between matte and high polish, highlights being what in white marble are the dark drill holes.
[38] cf. Mark Bradley, *Colour and Meaning in Ancient Rome* (Cambridge: CUP 2009).
[39] Rome, Museo Capitolinos.
[40] Dio Cassius, LX, 5, 4–5.
[41] Suetonius, Domitian XIII, 2.
[42] During the Reformation colour was once more regarded as deceptive and harmful to the soul.
[43] cf. Christel Meier, "Die Bedeutung der Farben im Werk Hildegards von Bingen", in *FMSt* (*Frühmittelalterliche Studien)*, Vol. 6. Band (Münster: Institut für Frühmittelalterforschung 1972).
[44] cf. Ernst Benz: "Color in Christian visionary experience", in *Color Symbolism*, Eranos Yearbook*,* 1972.
[45] The golden statue of St Foy is studded with coloured gems.
[46] Bernard gives an account of their impression in his book *Miracles de sainte Foy* (reprinted in Bernard de Clairvaux, *Commission d'histoire de L'ordre de Citeaux* III (Paris, 1953); cf. also Hans Baltung, *Likeness and Presence: A history of the image before the era of art* (1994), Appendix 34, p. 536, "The statue and saint's cult in the Abbey of Conques; Bernard of Angers, book of the miracles of St Faith (11th century)". The entire passage is given in English translation. "According to

an old tradition, every church here [in the Auvergne] has a statue of its saint made of gold, silver, or other metal to enclose the head or another part of the saint. This practice was considered a superstition by enlightened people and seems at first sight to continue the cult of gods or demons. I too was thought less enough to see it as an abuse of the Christian faith. I first saw the statue of St Gerald, made entirely of pure gold and precious stones, on the altar in Aurillac. His face was animated by such a living expression that his eyes seemed fixed upon us and the people could read from the lustre of these eyes whether their plea had been heard. I turned, as I now remorsefully confess, to my companion Bernier and asked him in Latin: 'Brother, what do you make of this idol? Would Jupiter and Mars think the statue worthy of them?' Bernier, who shared my feelings, agreed emphatically. As true veneration is only fittingly directed at God, it seems absurd to make statues of stone, wood, and bronze, unless of our Lord on the cross. For it is customary throughout Christendom to venerate the divine crucifix in sculpture and bronze, to guide our piety to his Passion. But to remember the saints … one should be content with the truthful writings of a book or with paintings that show them on frescoed walls. Statues have only been justified on grounds of the long-established traditions that cannot be eradicated from the common people. The error was so popular here that I should have been treated like a criminal if I had openly insulted the statue." (1.13). In the next section, Bernard justified his change of mind as regards the veneration of statues of saints: "Her image [St Faith] is not an impure idol but a holy memento that invites pious devotion and strengthens our wish for the powerful intercession of the saint."

[47] Fritz Haeberlein, *Grundzüge der nachantiken Farbenikonographie* (Vienna: Anton Schroll 1939).

[48] Gottfried Haupt, *Die Farbensymbolik in der sakralen Kunst des abendländischen Mittelalters* (Dresden: Verlag M. Dittert 1941), inaugural dissertation.

[49] Ibid., p. 58.

[50] Ibid., p. 81

[51] Münsterschatz, Essen.

[52] Haupt, p. 58.

[53] I am most grateful to the late Dr John Gage for having read and commented on an earlier draft of this chapter.

CHAPTER EIGHT

RENAISSANCE AND REFORMATION: PAINTERLY FINISHES ON THE WANE

> Not everyone who can hew a block of wood is able to carve an image; nor is everyone who can carve it able to outline and polish it; nor is he that can polish it able to paint it.[1]

The issues which concern us in this chapter will take us to three geographical areas: Italy of the early Renaissance, the German-speaking countries of the Reformation period, and Spain of the fifteenth to sixteenth centuries. In order to follow through some of the ideas involved, a linear chronology has been abandoned. Instead, the time sequence adopted follows a loop to accommodate two sets of chronologies which are discussed separately. In the first instance we shall consider certain events related to the Reformation period, notably those concerning iconoclasm; they are spread out chronologically. Secondly, for the sake of moving on to concepts or events appertaining to the Renaissance and to straddle the time-lag between the early Italian and the northern Renaissance, the latter period – that is, the beginning of the northern Renaissance – will be discussed before taking up events across the Alps, in Italy, which takes us back in time by some decades. There we shall be in the company of a cluster of artists who, each in his own way, contributed to a rebirth of art. Italy was untouched by the Protestant Reformation, except by the lone voice of Savonarola calling for a purge. Spain, too, escaped iconoclasm; instead her inquisitors rallied against a more sacred image, the living image of man. Our interest in Spain rests with her most able sculptors and painters, whose sculptures introduce us to yet another facet of the art of polychromy.

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A small alabaster group by Conrat Meit of Worms, *Judith and Holofernes* (*c.* 1525) is based on the subject that, some sixty years earlier, inspired the Italian sculptor Donatello (1386–1466). Both masters

interpreted the apocryphal story in a manner that revealed their own background and the time in which they lived and to which they contributed through their art. In each case conventions were set aside and new grounds broken. Although a generation apart, each work stands at the beginning of a cultural and political upheaval or change. Donatello was an exponent of the early Italian Renaissance. With his *Judith and Holofernes* (*c.* 1465?) he liberated statuary from its traditional frontal viewing point. The free-standing bronze statue is comprehensible to the spectator from whichever side it is approached. Donatello presented his *Judith* as a powerful symbol of civic pride and moral liberation: the victory of humility over pride and vice, according to the now lost inscription. The Italian bronze group shows Judith in action, she is about to sever her opponent's head; whereas Meit's *Judith,* a nude figure, appears pensive – the deed is done.

Two quite different interpretations, yet both closer to humanist thought than to Christian dogma, mark the beginnings of the Italian and, later, the northern Renaissance. They reflect the individual and the collective mind of a new age. It is the *Judith and Holofernes* by Conrat Meit with which we resume our subject, colour in sculpture, as it relates to the Renaissance and Reformation period. This small, collectible item exemplifies for us a new beginning and also the period we have entered. It demonstrates, too, a departure from traditional image-making. The group was probably carved between 1510 and 1515. The alabaster, polished and silken, imitates the soft white skin of a young woman. Although the group has been only partially painted it is, in fact, a realistically finished polychrome work. Hair, eyes, mouths and sword were given natural colouring. The pubic hair was omitted, also the gore from the beheading. The weighty dark head of Holofernes rests on a pedestal suggestive of the revival of a classical idiom.

The naked figure is holding calmly the head and the sword, her emblems of victory, neither "clothing" her nudity. She does not wear the rich, colourful garments which Judith wore when visiting Holofernes. Neither is she a Gothic female saint whose canonical colours veil her vulnerability or who covered any immodesty with her loosened hair, as do the *Mary Magdalene*s by Erhart and Riemenschneider. There is no sign of blushing on this nude figure, thus banning from thought any idea of the mythical Galatea who unexpectedly came to life.[2]

Alabaster and ivory nude figures required very little application of pigments. The costly colours and gilding were often limited to facial features or used to emphasise accessories. As the sparse colouring of the nude seems natural, we may at first overlook the subtle change with regard to polychromy during the first two decades of the sixteenth century. The representation of the nude appears in itself complete and yet, shown

without her protective clothing, she is made to stand exposed to chill and glare.[3] But there was another reason for adopting a subject such as Judith and Holofernes. Judith stood for political liberty. The union of Swabian towns chose her as their patron saint "to justify the German princes, partisans of the Reformation, in opposition to the Emperor".[4]

Fig. 8–1 *Judgement of Paris* (1550), by Hans Ässlinger (d. 1567), after Raffael and Marcantonio Raimond. Relief, fine-grained limestone of Solnhofen. Inv. no. BNM–D29208 © Bayerisches Nationalmuseum München.

With humanism on the rise and with the uptake of new subjects, greater use of the nude figure was made. The standard example was Adam and Eve, who lost their fig leaves (Masaccio: two versions) and coats of paint. Carvers of boxwood reliefs drew on Old Testament stories such as Susanna and the Elders (consigned to the Apocrypha in Protestant Bibles) or on ancient myths such as the Judgement of Paris (Hans Ässlinger, 1550). Loy Hering (*c.* 1535) took up another classical theme, Romulus and Remus taken from their mother Rhea Sylvia, therewith justifying the reintroduction of the naked body. Then statues for courtyards or fountains – David, Apollo, Neptune, personifications of Seasons and Virtues, and the ever playful putti – all made being nude appear entirely natural. By and large these figures stayed monochrome. The want of colour so pertinent to earlier Christian subjects was exchanged for the sensuality of form and content.

Fig. 8–2 *Calvinistic Iconoclasm in Flanders*, engraving by Jan Luyken (1649–1720). Bildarchiv preusischer Kulturbesitz, © bpk No. 00032412: Hamburger Kunsthalle. Christoph Irrgang.

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In Chapter 6 we have encountered late fifteenth- and early sixteenth-century carvings which were "wood-visible".[5] These works were either painted only partially (eyes, mouth, attributes) or not at all except for a translucent protective finish. Several altarpieces were minutely examined by conservators, who concluded that some major works by Till Riemenschneider and one by Veit Stoss were indeed never polychromed. Oak carvings such as the altarpieces by the north German sculptor Heinrich Douvermann and the choir stalls at Ulm and Blaubeuren by Jörg Syrlin were also left "wood-visible", except perhaps for the eyes and mouths of some figures. For small sculptural items boxwood and pearwood, and also Solnhofer stone, became the favoured materials in southern Germany and Tyrol. With these the intention was, as a rule, to retain the look of the material and to let the superb carving technique become suggestive of colour by way of reference to nature and seasonal shades. Here, colour memory was brought into full play. Polychromy

became dispensable, for the carving techniques and the mastery of the sculptural medium proved equal to the ploys of applied colour. Several leading sculptors of a new generation (Leinberger, Hans Daucher, the monogrammist LH and Loy Hering) combined subject matter, technique and material that favoured the nude figure, the bare or blank material and a polished finish. Neither Old Testament nor secular themes required colour symbolism based on Christian ideology. Thus it was possible to express greater realism through naturalistic means.

The intentions that governed the shift from polychrome to monochrome sculpture are complex and may be only summarised here. Basically, the call for less colour within the context of religious art and architecture had been heard for some time. In France during the twelfth century the Cistercians had pursued a policy of minimising colour inside their places of worship.

North of the Alps, with the onset of the Reformation period (1520–60), images of saints (especially sculpted ones) and highly elaborate altarpieces came under attack. But why? In 1522, five years after the reformer Martin Luther (d. 1546) made public his ninety-five theses, thereby initiating the Protestant Reformation (at large), the Protestant theologian Andreas von Karlstadt published his attack on images. He regarded such artefacts as relics of heathen idol worship.[6] A year later the Swiss reformer Ulrich Zwingli (d. 1531) formulated his anti-picture theories. Another influential churchman, Hieronymus Emser (d. 1527), replied to Karlstadt by referring to five classes of wholly unacceptable images which should not be allowed in churches: (1) those which were morally offensive, (2) (so-called) miraculous images, (3) costly cult images (4), too many images and (5) particularly artfully crafted works. In Strasbourg Martin Bucer (d. 1551), another leading reformer, stated at length in his treatise "On the Abolition of Images ...", that there should be no beggars among Christians. He thus reiterated views already expressed during previous attempts to reform the church.

Bernard of Clairvaux, the founder of the Cistercian order, proclaimed as early as the twelfth century that the church must look after her poor and not indulge in costly cult objects. The reformer and Hussite Nicholas of Dresden (d. 417, at the stake) published two works on images[7] and he also condemned the cult of images long before Karlstadt, Zwingli and Bucer voiced their concerns. Adherents of the early Czech reformed church, the Taborites (who later formed the Merovian Brotherhood), did away with images and liturgical vessels altogether. The first cries for reform were heard in many parts of Europe. The Waldensians, an Austrian movement, and the Taborites on the one hand, and Wycliff (d. 1384) in England on

the other were critical of any display of costly objects and the presence of lasciviously bright colours in a house of prayer. They banned such things – whether altarpieces, polychrome carvings or chalices and communion vessels – from any place of worship. Colour was not only a huge and unnecessary expense, but it was also associated with the "Babylonian Whore", the great temptress. But these were almost lone voices in the wilderness for little changed, although by 1497 the Florentine Dominican friar Savonarola cried louder and preached against all excesses, calling out for help to the poor. The fire and heat he kindled consumed his own life in the end.

Even the humanist Erasmus of Rotterdam, whose book *In Praise of Folly* (1509) was translated into Czech in 1513, made Folly denounce images:

> I am not so foolish as to ask stone images, painted up in colours; they would but hinder the worship of me, since by the stupid and dull those figures are worshipped instead of the saints themselves. And it would come about with me exactly as it does with the saints – they are thrown out of doors by their substitutes.

A number of illustrated manuscripts alluded to the "fallen idols" in their miniatures. They were shown toppling from their pillars in the presence of any saint, or idols were depicted as having caused harm to idol worshippers. In reality iconoclasts dealt with the offensive images in a number of different ways. The brush became a tool of offence. White-washing, besmearing with tar or excreta and painting over with the blood of cows were some methods of deconsecrating holy images. Another was the mutilation of sculptures: noses, mouths, eyes, hands and heads were attacked, whereas wooden statues were often used as logs, thus demonstrating their greater value to the poor who needed to be kept warm.

One particular manuscript was brought out from its closet, not to be burned but to be consulted. It had been written seven centuries earlier. The *Libri Carolingi*, a fundamental document concerning holy images in worship, was prepared by Charlemagne's advisers for the 794 AD synod in Frankfurt (but never debated).[8] It appeared in print in 1529 for the first time and served as a basis for the ensuing theological discussion during the Reformation,[9] although without having much impact.

But this was not the only text which circulated among the debating factions. The new technology of printing[10] encouraged pamphleteers to make their views more widely known. A pamphlet, illustrated with a woodcut by Erhard Schoen, described in versified form the "Lament of the poor persecuted idols and temple images". This parody of 383 verses was

released in about 1530, when iconoclasm began to spread more widely.

To give some idea of the extent and manner of destruction, in Augsburg at the beginning of the Reformation (1524), images were ritually deconsecrated or damaged. In St Gallen (Switzerland) forty wagon-loads of wooden statues were removed in 1529. In the German town of Göttingen only statues were destroyed, not any pictures. In 1531 the removal of images in Reutlingen (south Germany) was undemonstrative, whereas in Ulm the authorities tolerated a tumultuous clear-out of statues and altarpieces. Iconoclasm was also ripe in England during the period between 1535 and 1660. In 1539 the Lutheran town of Sagan in Silesia sold sixteen altarpieces to neighbouring Roman Catholic Poland. Sweden, although converted to Lutheranism, escaped iconoclasm altogether. It would appear that in those places where the people already harboured some grievances, often of a socio-economic kind, the destruction of images were more prevalent.

The way in which holy images were disposed of varied greatly, for some town councils or clergies were exercising greater tolerance or sensitivity regarding the gifts of donors, who were sometimes advised to remove what they had given. While some Protestant communities showed great pragmatism when they sold off their altarpieces and statues to their Catholic neighbours, in other places a "wait and see" policy saved some valuable works of art for posterity. Veit Stoss's *Angelic Salutation* (1517/18) simply remained wrapped up in its sackcloth in Nuremberg, for a long-lasting season of penance.

Martin Luther, less radical than some reformers (such as Karlstadt, Bucer, Zwingli and Calvin) had reservations about the virulent removal of images.[11] While emphasising the word rather than the image, he nevertheless accepted that a narrative and annotated image were permissible alternatives to the prohibited cult image, for they were images of "memory or witness". However, most reformers objected to the sensuality of shape and colour and supported, if not encouraged, the white-washing or removal of idols from public places of worship. Private devotional images were not touched.

Every iconoclastic period casts a shadow over sculpture-making. Not only were great works of art spoiled or destroyed, but the professional standing of the sculptor was also assailed. For this reason we need to give some space to the discussion of the negative forces and the consequences they had on the development of colour in sculpture, before examining two quite different aspects of polychromy: glazed sculpture which Luca della Robbia popularised in Italy and the art of the *etofere* in Spain.

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The harm done by the iconoclasts was twofold: firstly, there was the actual material loss of cult objects and, secondly, many once flourishing workshops ceased to function. In many communities the specialist craftsmen struggled for a livelihood, for church patronage in Protestant countries practically ceased or, if here and there new works were commissioned, these would be pulpits rather than carved polychrome altarpieces, and simple crucifixes rather than statues of saints. Although private art patronage was on the increase from the fifteenth century, it could not absorb all the redundant skills available. Still, where possible sculptors and painters moved to Roman Catholic countries, where they hoped for employment. For example, Conrat Meit became court sculptor to Margaret of Austria in Mechelen (Flanders), and Daniel Mauch (1477–1540) left Ulm and moved to Lüttich. Many painters and sculptors however sought any kind of employment, whether it was the making and painting of carnival masks or some other gainful job. Then, as today, specialist skills needed to be matched with an ability to adapt, transfer or learn new skills fast. But then, would they not sooner or later have had to adapt for, as art historian J. Chipp Smith observed, "By about 1520 a saturation point had been reached in many areas of Germany. The stage was set for Martin Luther, Andreas von Karlstadt, Ulrich Zwingli and, later, Jean Calvin."[12] This, of course, applied to holy images rather than to secular works of art which were fostered by a new humanistic spirit.

We have already noted that by the end of the fifteenth century certain workshops intended to keep their carved images monochrome or had them only partially painted. We have no documents telling us why Riemenschneider decided, at that stage, against full polychromy. But of Veit Stoss we know that it was his son, the abbot and his patron, who specified in 1520 in a separate document, not in the contract itself, that the carving of the Bamberg Altarpiece should remain wood visible. This trend towards the monochrome sculpted image was continued by sculptors such as Hans Leinberger (d. after 1531),[13] the Master IP[14] and many more, who refrained from using bright colours or omitted polychromy altogether by exchanging texture for paint.

The sixteenth-century sculptors of Renaissance Germany were highly competent carvers (and modellers, for the same trend of creating a rich surface texture may also be observed in bronze casts). Their naturalistic images had an abundance of forms and details which compensated for the absence of pigment while suggesting the chromatic effect of the objects represented – such as trees, flora, furs or plumes – through carving or

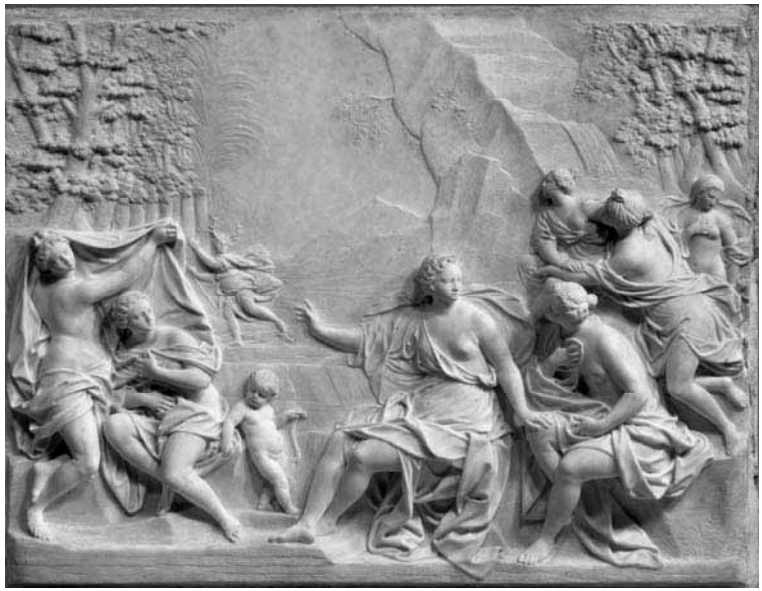

Fig. 8–3 *Diana with the Nymphs*. Relief in marble (*c.* 1710), by Giuseppe Mazza (1653-1741), Bologna, Italy. © Skulpturensammlung und Museum für Byzantinische Kunst, Inv. no. 284; SMB / Jörg P. Anders.

modelling. These were, in a sense, "memory colours": the form of a pine tree is always associated with a satiated dark green. Naturalism cancels out colour symbolism, the other means of colour association. The medieval colour code on which for so long religious images depended was no more of essence. The narrational style of new subject matter could be equally well expressed in monochrome, as the prints of uncoloured woodcuts and engravings showed. In any case, these now often included nude figures (Adam and Eve, Susanna in the bath, Judith or mythological figures such as Venus or Diana) who had laid their robes aside and with them any showy colours and any need for colour symbolism.

Chromoclasts could not fault these images as none was painted in expensive and sensuous colours, nor could moralists blame them for their content as nudity was natural and in agreement with Old Testament narrations. If these were sensual images they were not so on account of colour but of form and texture. We see a change in attitudes and in taste. The Protestant ideal favoured sobriety and rejected exuberance, preferred black and white to chromatic colours, and opted for a white-washed church rather than one which was filled with every kind of colourful

image. But this was also the taste acquired by the humanists, who modelled their ideals on an almost forgotten culture. What had survived of antiquity seemed to have had very little colour, it appeared for the time being. In Italy the earlier finds of ancient statuary and the examples of classical architecture rediscovered were of stone colour, much of it of white marble.

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Leon Battista Alberti, the Renaissance architect, painter and scholar, preferred purity and simplicity of colour, and unadorned white temples. Therefore it was not surprising that he assumed that a sculptor will prefer pure white marble. The English historian Peter Burke remarked as follows:

> it was as if whiteness was aesthetically pleasing to Alberti; the outward sign of reason, perhaps. Alberti's defence of simplicity suits the work of his friends Brunelleschi and Masaccio very well. Brunelleschi banished frescoes from his interiors, such as S. Lorenzo or the Pazzi Chapel. Pius II also placed a high value on light, whiteness and simplicity, as is clear from his comments on the cathedral he had built at Pienza. The walls, he wrote, gleam with a "marvellous whiteness" (*candore mirabilis*) and he issued a bull with the command, "Let no one make any pictures", presumably prohibiting frescoes, not just graffiti.[15]

In reality two of his contemporaries, the sculptors Donatello and Luca della Robbia, still regarded colour as an essential ingredient in their work, and we have to wait for Bernini to explain how white marble can satisfy one's puritanical taste and intellectual desire to see an achromatic coloristic image emerge from it.

Donatello (*c.* 1386–1466) was trained in a tradition of sculpture-making which, as in other parts of late medieval Europe, used colour as a means of completing, embellishing or assisting in the reading of an image. He did not use colour symbolically, for he was interested in a realistic portrayal of his subjects. Donatello was a versatile sculptor; he worked in a number of different media – wood, marble, terracotta and wax – in preparation for bronze casting. The English art historian Charles Avery stated in his Donatello monograph that "[Donatello] frequently painted his own statues and reliefs, some of which were cast in stucco. These media made different demands and permitted various solutions, with a great range of textures and colours."[16]

Donatello made two different statues of David. The earlier one was a marble carving which he painted elaborately and gilded. It was installed in the town hall in Florence in 1416.[17] His second *David* is a bronze cast

which, like his *Judith and Holofernes* group, was a free-standing piece of work. The statue of St Louis of Toulouse (*c.* 1423), made for a niche, was fire gilded and had some (royal) blue enamelling on the saint's mitre. The two other bronzes, both commissioned by the ruling de' Medici family, were made to be seen from all sides in their respective open plazas.[18]

Each piece of work points to a phase of artistic development which, although peculiar to Donatello, is of course also characteristic of the early Renaissance, of which Donatello was a leading figure. He probably learned bronze casting while working for Ghiberti (1404–07), who at that stage was modelling the second pair of doors for the Florentine Baptistery. Bronze gilding may have been part of his early training, although Ghiberti's fully gilded Gates of Paradise, the third pair of doors, were made much later (1425–52?), when Donatello was already an independent sculptor. He gilded several of his own bronzes. Some of the reliefs, such as those for the St Anthony Altarpiece in Padua (1446–53), he gilded selectively in order to assist the reading of the design and also to emphasise the use of perspective. Partial gilding is a means of highlighting or contrasting elements of the design which contributes to a more dramatic representation.

We may assume that Donatello polychromed the marble *David* according to standard workshop practice, which Cennino Cennini had laid down in his *Il Libro dell' Arte* (*c.* 1390). The bronze cast of David was altogether different from what might have been expected. The young nude male figure, still adorned with hat and footwear, breaks with any convention. Freed from its niche, the bronze was neither gilded nor otherwise treated to suggest additional colouring. The smoothly polished body stood calmly on its pedestal, as pensive and detached as the *Judith* of Conrat Meit. Donatello's own *Judith* however invites the viewer to see her from all sides as she stands on the water-spouting cushion, thus towering over her adversary. The silvery jets of water suggest the release of energy (or blood).

Regarding the use of colour in sculpture, Donatello seemed ambivalent. During mid-career he created a number of very shallow white marble reliefs. He employed a delicate carving technique which is almost akin to that of another medium: silver point drawing. His reliefs are in contrast to the deft modelling of his dancing putti for the cantoria, which stand out against the multi-coloured mosaics of background and pillars that remind us of the Gothic tradition of the work done by the Cosmati and of Arnolfo di Cambio's tomb of Cardinal Guillaume de Braye.

But the test came when decorating the interior of the Old Sacristy of San Lorenzo (*c.* 1429), which was the cause of his greatly upsetting his

architect friend Brunelleschi. Charles Avery writes:[19]

> The story goes that Brunelleschi fell out with his old friend Donatello over the dramatically modelled and brightly coloured stucco reliefs which the sculptor inserted within the grey sandstone architectural members and whitewashed walls of Brunelleschi's Renaissance design. It is understandable that an architect might prefer the stark effect of a blue-print to the decorative scheme that – presumably – his patron Cosimo preferred and called upon Donatello to execute.

Apparently against Brunelleschi's wishes, Cosimo de' Medici entrusted the filling in of the vacant frames to Donatello. According to John Pope-Hennessy,[20] the objections to Donatello's reliefs in the Old Sacristy were twofold: firstly, their perspective structure violated the plane of the wall surface; and, secondly, their discordant local colouring disrupted the tranquil architectural forms.

In the 1980s these stuccoes were at last restored to show again their true colours, for the thick dust layers had made the figures in the roundels appear of a uniform greenish colour; only the halos had enough shimmer to be discerned as gold.[21] The stucco roundels were modelled in situ in the rapid and unfussy manner characteristic of Donatello. The scientific examination which was carried out by the restorer Cristina Danti revealed the several stages of building up each coloured tondo, as was demonstrated on the hand of the *St John of Patmos* and *Martyrdom of St John* reliefs. Donatello first used white stucco for the figures and red for the background. He then proceeded to paint in frescoed colours. According to Danti:[22]

> he indicated shadow with a darker-toned red relief; and in certain areas of both narrative reliefs he used polychrome to create important expressive and perspectival effects. All the figures, however, are left absolutely white. The last intervention, made *a secco* (i.e. painting over the dried plaster), was the coat of azurite stucco clouds; these shine through the transparent layer of paint as a shaded pale blue, apparently streaked by the wind.

She also observed that:

> the only note of frescoed colour is the red which gives a mulberry tone to the secco azurite in the backgrounds of the figures, and makes a coloured foil to the foliage decoration around the frames, also in white plaster.

In the Pazzi Chapel in Florence, also designed by Brunelleschi, roundels once more play a prominent part. These, however, were the work of Luca della Robbia, who by then (mid-fifteen century) was proficient in the

technique of enamelling terracotta. Brunelleschi and Luca agreed on a bi-chromatic colour scheme, blue and white, which reinforced rather than disturbed the architectural harmony. The twelve roundels also harmonise among themselves, for their uniform treatment, with the exception of *St Peter*, and the white and blue glazes with surface gilding blend in with the architecture.

But before discussing further Luca's contribution to polychrome sculpture, let us turn to other works by Donatello in order to discern his attitude towards colour in sculpture, which seems rather ambivalent. In 1438 Donatello carved in wood a figure of St John the Baptist for the church of St Maria Gloriose dei Frari in Venice. Charles Avery referred to it as a "luxuriously painted and gilded statue".

As this was a wood carving it was finished in the traditional manner, which would have satisfied the patrons and looked right in its allocated setting. However, the subject matter did not call for the display of "luxury". Indeed, Donatello interpreted his subject with a deep understanding of the meaning of repentance (the message of St John the Baptist) and conveyed it through the expression of the figure. Donatello never aimed at rendering beauty for beauty's sake, whether with the aid of colours or without – on the contrary. Realism, and that was what he aimed for, included ugliness. Neither the statue of the Baptist nor his *Mary Magdalene* (1455?), a bronze cast, was conceived as outwardly beautiful, for they represent two gaunt-looking beings whose glory and beauty was yet to come. However, his interest in realism may be traced back to a much earlier work, his painted terracotta bust of the Florentine Niccolo da Uzzano, who died in 1433.

The bust is based on the death-mask taken from the deceased. While retaining characteristic features of the death-mask (sunken eyes, pronounced bone structure under the taut skin, lengthened section between the nose and the upper lip), Donatello remodelled and opened up the eyes. It is the earliest known quattrocento bust to assimilate a natural cast of the face.[23] Niccolo da Uzzano was presented as an ancient Roman; he wears a toga.[24] Many Florentine busts produced during the fifteenth century were polychromed, particularly those in terracotta. Andrea del Verrocchio (1435–88) twice modelled a terracotta bust representing Lorenzo de' Medici and painted it in what appear today as rather sombre colours. However, not only terracotta busts but also marble carvings of various sitters were finally painted, though perhaps only partially. The Venetian Francesco Lauran (*c.* 1430–1502?) sculpted a bust of a young lady, *Laura*, which he afterwards had painted. The pigments were applied directly onto the white marble, which was of an impure quality.

While we could enumerate many examples of polychrome busts, there are as many which were of polished marble without any further renderings. Desiderio da Settignano (1428/30–64) did not resort to the brush but relied entirely on chisel and emery cloth for a realistic finish for his delicately carved marble busts of women and children. Mino da Fiesole (1429–84) and the Rossellini brothers, Bernardo (1409–64) and Antonio (1427–*c.* 1479) also produced life-like portraits of their contemporaries without always resorting to paint. Indeed, Antonio's marble bust of a doctor, *Giovanni di Antonio Chellini da San Miniato* (1456), was never painted; the polish and the slightly uneven colouring of the material gives it a characteristic look of ageing skin.

Fig. 8–4 *Mary Magdalene,* wood carving, painted by Donatello Niccolò di Betto Bardi (1386–1466), *c*. 1455. © Museo dell'Opera del Duomo, Florence, Italy.

As the art of portraiture in sculpture developed there was a shift away from polychromy, which was fully compensated for by heightened skill in imparting life-resembling qualities. As already noted, the portraits were sometimes based on death-masks. More importantly, there was an awareness that by so doing they (the sculptors) followed an ancient tradition. None other than Michelangelo Buonarroti (1475–1564) exemplified this trend with his imaginary bust *Brutus* (1539–40/?) which, not unlike Donatello's *Niccolo da Uzzano*, was looking back to the past, his head turned.

Perhaps we also need to remind ourselves of the past and the historical development of polychromy. Rudolf Wittkower gave this succinct summary:

> The Greeks invariably painted at least part of their marble sculpture, above all the dress, hair and eyes. Rome introduced uncoloured, white marble and this was perhaps one of the most important or, in any case, most effective contributions of Rome to the history of sculpture. It is fair to say that it was in Rome and not in Greece that classical sculpture was born. Medieval sculpture was once again polychrome, but the link with the uncoloured marbles of ancient Rome was never entirely broken. The dawn of the Renaissance and the re-assertion of criteria valued in ancient Rome led to an interesting dichotomy in the history of sculpture. Sculpture aiming high, or created for a discerning audience, for the great and learned, imitated the uncoloured marbles of Rome, whereas polychromy was almost exclusively reserved for popular works made of cheap materials.[27]

Luca della Robbia (1400–82) belonged to that early cluster of Renaissance artists who made a major contribution to the development of sculpture. He, like Donatello, Ghiberti and Brunelleschi, and the painter Masaccio, absorbed into his art classical idioms which he had observed when studying at first hand objects from antiquity. Ghiberti collected antique sculpture, Donatello and Brunelleschi visited ancient sites; indeed, archaeology was a creation of the Renaissance,[28] to which Luca also had turned, for his white marble reliefs of the Cantoria witness to that fact. That he should make polychromy a characteristic trait of his work from the 1440s onwards may therefore come as a surprise because neither then nor, in fact, until the post-Neoclassical period was colour deemed an essential feature of antique sculpture.

Luca was a man of his time, enterprising and with acumen for business. When he turned to producing enamelled terracotta sculpture he, in a sense, upgraded the existing practice of colouring terracotta sculpture, but more so. He created a monopoly for his method of colour finish. Luca was the first artist to develop a technique whereby tin-glazing could be applied successfully to sculpture. Extensive reference will be made to John Pope-

Hennessy, who studied the transition to enamelled terracotta in his monograph *Luca della Robbia* (1980), in this context.[29]

The conventional pigmented terracotta sculptures were subject to fading or organic change, yet anybody in the trade was able to give terracotta sculpture the required finish. Pope-Hennessy affords us some insight into the prevailing custom of colour:

> A very large number of terracotta sculptures were produced in Florence in the third and fourth decades of the fifteenth century, and their surface was commonly covered with priming and colour. This was the practice in the itinerant shop of Michele da Firenze, and it was adopted in 1420–4 for an important group of sculptures commissioned for Sant' Egidio. They comprised twelve statues of Apostles made for the interior of the church, which have disappeared, and a relief of the Coronation of the Virgin over the entrance, which is still preserved. Like the lost Apostles, it was modelled by a sculptor, possibly Dello Delli, and was coloured by a painter, Bicci di Lorenzo, who first covered its surface with priming (which was at one time mistaken for white slip) and then added colour and gilding. The substitution of enamelling for pigmentation was not a simple change; it meant that an elementary technique open to any journeyman sculptor or painter was replaced by a procedure that was immeasurably more complex and more specialised.

No doubt Luca della Robbia experimented before arriving at a satisfactory result. Some of his earlier enamelled terracottas showed flaws that point to problems during the firing process. In 1441 he received his first major commission, two lunettes in enamelled terracotta above a doorway of the North Sacristy of the cathedral, and from then on this became his main medium, with the exception of the Federighi Monument (1454), which is of marble with glazed terracotta embellishment. By 1443 he was as competent in enamelling as the ceramists who had made drug jars and majolica vessels for more than a century. What he tried to achieve was the application of various colour glazes over a modelled surface.[30] The process of manufacturing enamelled terracotta sculpture has been described in some detail by Pope-Hennessy:

> The first stage was the modelling of the clay relief, which received its first firing *abistugio*. If of a substantial size, the figure was, before firing, cut into sections, but wherever possible it was fired as a whole to preserve its continuity of modelling. The hazard of irregular shrinkage was considerable, and measures were taken to ensure that the firing was uniform. The relief was then reassembled and covered with *marzacotto* (a transparent fusible glass frit) which, when absorbed, left on the terracotta a powdery surface of unfired glaze. The composition of the *marzacotto* used

> by Luca della Robbia differed materially from that employed in the making of majolica. At a much later date lead was added to standard *marzacotto* by ceramicists to make the resulting surface whiter, and this may have been the practice from the first in the Della Robbia shop. Colour was then superimposed on the *marzacotto* and the sections were fired again, probably at a lower temperature than before. In this second firing the pigments and glaze amalgamated. With majolica the pigment was sometimes covered with a transparent overglaze or *coperta* before the second firing, and this procedure seems also to have been followed in Luca's reliefs. The result was an enamelled surface which was not only of great brilliance but was hard and durable.[31]

As many of these early glazed terracotta reliefs were commissioned for interiors, the idea that Luca resorted to vitrified lead glazes for the sake of weather resistance and durability does not bear out. Rather, as with the lunettes, the "decisive factor must have been qualities that made them superior for their purpose to works in other media, namely their colour and their legibility". Coloristic emphasis of this kind was, suggests Pope-Hennessy, promoted by Brunelleschi when he designed the Pazzi Chapel with twelve circular stone frames. These received later the twelve enamelled terracotta reliefs showing the apostles.

The colour range used by the Della Robbia workshop comprised white and blue, yellow, brown, purple, dark green and light green. No red glaze could be produced, and a manganese purple was commonly substituted. Pope-Hennessy points out that initially the range of colours was wide (Peretola Tabernacle) but later contracted "not due to limitations of technique, but to aesthetic choice".

Glazed terracotta sculptures became very popular as they were an inexpensive substitute for sculpture in other media. Luca's gifted nephew, Andrea della Robbia, joined the flourishing workshop, which he headed after his uncle's death. Both sculptors made use of many classical features in their various designs. Their dependence on colour however is out of character with what was promulgated as being "classical" during the Renaissance, for it was generally believed that in antiquity sculpture was monochrome. In this respect, the polychrome sculptures of the Della Robbia workshop continued the native tradition of colouring sculpture while their contemporaries predominantly opted for bronze casts and white marble.

During the Renaissance the arts of painting and of sculpture were about to declare their independence from one another. Sculptors and painters were pursuing problems peculiar to their own medium. We must therefore take a sideways look at how colour was treated in painting.

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The training of the Italian fifteen-century painter embraced a thorough knowledge in the preparation and use of colours. Two early treatises offer an insight into the theoretical framework and are invaluable to us as historical documents. Cennino Cennini (whom we have already met)[32] advises young painters how to produce colours and use them on well-prepared surfaces, whether they are flat or modelled. (He did not refer directly to sculpture and the task of the polychromer.) He related largely to fresco painting, but also to the painting of panels by recommending ways of building up the complementary colours layer by layer. The glowing local colours stood out, often to the detriment of pictorial depth or compositional harmony.

With the development of the linear perspective, the organisation of pictorial space was being advanced, but it was the harmonising of the colours that allowed a new perception of volume and depth. This was the contribution of Alberti (*c.* 1435), who studied Aristotle's colour theory – on which his own treatise *On Painting* is based. The much shorter treatise *On Sculpture* again omitted any reference to polychromy, which is understandable, for he remarked on the sculptor's possible preference for white marble, thereby reflecting a growing taste for monochrome sculpture. His palette included white and black for mixing, and yellow pigments for gold application. Saturated colours were, at least by the Florentines, exchanged for blended colours with which to model forms. White and black were, unlike in Aristotle's colour theory, only used sparingly, for highlights or recesses. While ancient colour theory and taste were the concern of Alberti, who advocated *disegno* and form to which colour had to submit, nothing suggests that a leading painter such as Piero della Francesco depended on a theory such as Alberti's colour code, whereas the Venetians had a quite different eye for and perception of colour.

The Paduan painter Andrea Mantegna (*c.* 1431–1506) showed in several major works where Renaissance painting stood in relation to antiquity and to sculpture. He applied the grisaille technique with the intention of emulating marble.[33] Colour had become subordinate to drawing and form. He was taught by the archaeologist-painter Squarcione, who once commented on his former pupil's work by saying that "stone was essentially a hard substance and it would never convey the softness and tenderness of flesh. Andrea would have done far better if he had painted his figures not in various colours but just as if they were made of marble." Andrea hence not only imitated marble statues; he painted some figures in monochrome as if they were cut of stone yet made them life-

like, having transformed the static tone model into a group that moves and breathes and feels.[34] Instead of petrifying life he animated stone, according to the art historian Alistair Smith, who pointed out that this element of competition and emulation between painting and sculpture was central not only to Mantegna's work but to Renaissance painting in general. And the sculptor-painter Michelangelo Buonarroti observed: "It seems to me that the nearer painting approaches sculpture the better it is, and that sculpture is the worse the nearer it approaches painting." His white Carrara marble statues plainly demonstrated this principle: the rejection of colour in sculpture. They also are antithetical to his richly colourful paintings; thus Michelangelo could not have made a clearer statement about colour's "rightful" place. Wittkower wrote, "To imagine Michelangelo's Medici tombs polychrome would seem a joke in bad taste, an almost sacrilegious idea."[35]

It is as if the art of painting were at last freed of her responsibility to a medium which in the past relied on being dressed by her with colours. Sculpture, now formally and technically strong, had no need to be covered in colour because of impoverished qualities, whether owing either to the material or to the lack of skills, but – as was demonstrated with every nude figure – the art had become a self-reliant and potent form capable of expressing flesh and emotions. In this respect the Italian Renaissance gave birth to new visions while the German Reformation purged its fecund art and aborted its excesses. In Catholic Spain however nothing would check the growth of an industry that was the product of religious devotion, zeal and imagination, except the regulations and divisions of labour to which even the most gifted sculptor and painter had to submit.

Art, the handmaiden of religion, embraced the vision of divine interaction, of heavenward sentiments, by portraying saints as if still among the living, real and there to be touched. They were meant to stir expectations, to release some of their healing power. The hems of their garments, the reassuring gaze of their glazed-over eyes, the *realia* of their sainthood, appeared convincingly genuine and allowed a momentary union of the spirit and the flesh. But it is exactly this emotional content, the open display of feelings, that brought Spanish polychrome sculpture into disrepute for being sentimental, overemotional, uncomfortably close to life. Although Italian Renaissance sculpture was no less charged with emotions, there is a perceivable difference. The subject matter is frequently historic, heroic or mythological, and if Christian the emotional ardour is as if kept in check by the purity of the white marble. The pure and untainted material thus channels any feelings evoked towards reason. What is displayed is, in a sense, metaphorical, leaving space for reflection

and meditation. It does not insist on such an intense emotional engagement as is experienced with Spanish polychrome sculpture. The Spaniards sought the reality of religion in the tangible, in their art, despite – or perhaps because of – some of the greatest mystics having been raised in Spain and having helped to shape Roman Catholicism during the Counter-Reformation. This is best understood by looking at the practical side of their art, for the sculptor and the painter were rooted in a tradition which they nevertheless tried to advance as they refined their skills; absorbed the various influences from France, Flanders and Germany; and developed concepts that grew out of their religious ideologies.

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By the beginning of the sixteenth century a new terminology had developed which reflected the specialised skills employed in the making of the ever more elaborate altarpieces. The art historian Ronda Kasl, who studied Spanish polychromy closely,[36] wrote as follows about the Spanish way of finishing a carving:

> The work of polychromy itself was undertaken by painters; the difference between the painter of pictures and a painter of sculpture was not one of occupation, but rather, one of technical specialisation. Polychromy was executed by artists skilled in one or more of several different painting, gilding and engraving techniques. Hence, a distinction is frequently made between the *pintor de imagineria*, a painter of sculptural images and the *pintor depincel*, literally, a painter who uses a brush. The term distinguishes the painter of pictures from the polychromer, who was skilled in techniques such as *estofado*, which requires the use of a stylus, rather than a brush, to engrave decorative line work. The *estofador* is a painter who specialises primarily in the imitation of textile patterns and textures (*estofa*), by painting over gilt areas and then engraving or incising the paint to reveal the gold beneath. The *dorador* is a specialist in the gilding of the framework (*ensamblaje*) of altarpieces, but usually not sculpture, a task reserved for painters. Thus the word *dorador* can also be understood as a painter who specialises in gilding. The painting of flesh tones (*encarnaciones*) was the work of a specialist called an *encarnador*.[37]

The word *estofado* became a key-word in the Spanish art of polychroming; it points to a highly specialised practice of finishing polychrome carvings. The imitation of rich brocade patterns was not unique to Spanish art. Flemish painters were also familiar with *estofado* (or *etoffere*, to use their own word) and so were the Germans, who however tended to employ the wax applique technique. But their designs were generally based on fabrics which had the same origin: imported textiles from Italy or collected prints.

Let Kasl explain further:

> The word *estofado* betrays its origin as a painted imitation of textile patterns and textures (*estofa*). These patterns were usually created by painting on top of gilding and then using a sharp stylus (*grafio* or *grafico*) to engrave or scratch away the paint layer to reveal the burnished gold beneath. Punches were also used, as were applications of patterned wax resist. The terminology used in polychromy contracts to designate different *estofado* patterns could be quite specific: *rajado* (parallel lines), *ondulado* (wavy lines), *espigado* (zigzag lines), *escamado* (scales), *picado* (dots). Many terms are, appropriately, the same ones used for needlework techniques: *punteado* (stitching), *granido* (coarser stitching), *ojeteados* (eyelets) and *gusanillo* (wrapped metallic threads). The use of patterns for *estofado* designs seems to have been quite common and these were sometimes transferred by means of templates called *patrones* or *borrones*. These patterns, like contract drawings for sculpture, could be accepted or rejected by clients[38].

The Spanish custom of earning new commissions was by way of competition among workshops. Frequently it was the lowest price that was accepted for the production of a new major work such as an altarpiece. Tactics of cut-throat pricing were sometimes employed, which inevitably had social implications: the gain or loss of a contract affected the livelihood of those concerned. It was a competitive market although customary practices and privileges were codified in guild statutes and ordinances. For instance, only those craftsmen who qualified by examination were eligible to undertake the work of a specialist such as the *etofere*. Spanish contracts appear to be more specific and prescriptive than those drawn up by their German counterparts. In Spain it was more common to commission the carving and the polychroming of a major work separately or to subcontract specific jobs than to hand over the commission to a workshop whose responsibility it became to hire suitable craftsmen (e.g. Veit Stoss, Cracow). This obliged sculptors and painters to interact rather more on a business level than their opposite numbers in other countries perhaps had to do. While everything was determined by the complex and hierarchical division of labour, the production of polychrome sculptures was nevertheless a collective effort.

The impression gained on seeing Spanish polychrome sculpture is that of a restrained colour scheme of gold and brown tones. In fact, it is as a rule a blend of gold, red, dark blue and touches of white and black with which the emulated rich pattern and detail were created. The controlled colour and pattern distribution subjugates each individual shade, thus effecting a more uniform colour impression. Of course, there are workshop

variations and an apparent preference for other tones, such as green or light blue. However, the massively gilded frames of the large altarpieces and the many statues of saints, shown either in their golden uniform of sainthood or in their dark or white habit of holy orders, leave comparatively little room for bright colours. Even the skin tone is checked by the surrounding matt (or dusty) gold, whereas reds, blues and greens often simply pick out an undergarment or the lining of sleeves, or provide a backing for the traceries. These works are not sensuous because of their rich chromatic colours, but if anything because of the realism and intensity with which the images convey a known event or portray revered saints.

The art historian B.G. Proske, who studied Castilian sculpture, remarked upon the polychromy typical of Felipe Vigarny's (1480–1542) school with his main altarpiece of Toledo Cathedral in mind:

> Gold predominates as a solid colour for the garments. Black is used for borders with the gold shining through in leaf scrolls, black or red for linings. A small amount of white appears in veils and wimples, in the Magdalene's guimpe and sleeve puffs, which are veined with black. Bands of black and white on the loincloth and the Magdalene's drapery are delicately patterned by letting the gold underpainting show through. Christ's body is painted a dull grey; the other faces are in tones of ivory and pink, the cheeks tear-stained and red lines drawn about the eyes.[39]

Neither Vigarny nor Leon Picardo (who polychromed all Vigarny's work until 1531, when he died) was Spanish – they were French – but they nevertheless helped to mould Spanish sixteenth-century art. The palette of Leon Picardo was lighter than that of Diego de la Cruz, a true Spaniard and the long-standing collaborator of Gil de Siloe.

Gil and Diego were responsible for the *Mira flores* retable made for the Charterhouse at Burgos. It was Gil's last documented work (1496–99). The retable is huge (about 10 x 110 metres). The first impression is "a blaze of gold in which the colossal body of Christ stands out, relieved against the great aureole". The art historian Harold E. Wethey gave this description in 1936:

> The polychromy has not been retouched, and it retains its original richness and splendour only slightly dimmed by time. The blue ground, except behind SS Peter and Paul, has been freshened a little. This medium blue background, decorated with golden stars, serves as a unifying basis for the tones of rich brown and gold in the figures and for the gilded tracery and canopies. The polychromy is notable for a sober restraint and for exquisite harmony effected by a symmetrical opposition of colours. The St Peter, for example, is predominantly brown with gold trimmings, and the St Paul balancing him is all gilded. The same alternation is partially carried out in

> the statues of the Virgin and St John, God the Father and the Holy Ghost who support the arms of the Cross. Monotony is avoided in the gilded robe of the Virgin by her white scarf and kerchief and by the introduction of a deep blue lining on the mantle. The hair and costume of St John are brown except for gilding on his collar and on the over-drapery of his skirt. Throughout there is a moderate introduction of white and an occasional blue to relieve the sombre gold and brown tonality.[40]

The Seville sculptor Juan Martinez Montañés (1568–1649) and Francesco Pacheco (1564–1654), painter and writer on art, are among the better known collaborators of the first half of the seventeenth century, although both also worked with other painters or sculptors. Much of what we know about Pacheco we learn from himself. His book *El Arte del a Pintura*[41] offers an insight into his own working method and also what was expected of him as a painter during his professional career. He became the censor of paintings to the Inquisition (1618) and a painter to the king (1619).

Three centuries after a busy life, Montañés found in Proske a sympathetic reviewer of his work. In the opening statement of her monograph (1967) she declared that Spanish sculptors were less well known than painters because:

> unlike painters they rarely ventured beyond the boundaries of the pious themes demanded by their patrons, and their preference for polychromed wood was condemned as a barbarity when the purity of neoclassicism was the prevailing taste of the eighteenth and nineteenth centuries, limited appreciation of their work.

Both authors, Pacheco and later Proske, offer observations essential to any understanding of Spanish polychromy and will therefore be referred to while discussing selected works by the two artists and their contemporaries.

In his book Pacheco wrote of his own contribution to the development of Spanish polychromy. He had seen good and bad sculptures and knew what was needed and how to improve or complete any such representation. He also prided himself that his art as a polychromer was equal to that of a painter and he was aware of his own development as an artist, for he was able to record precisely when he first adopted a new approach in rendering the flesh.

Traditionally the flesh tones, or *incarnacione*, were glazed, which gave them an artificial brilliance quite unnatural to real flesh. Pacheco claims that he was the first in Seville to exchange gloss for matt finish, even giving the date. It was in 1600, on 17 January, that he "painted with matt flesh tones a bronze cast of a crucifix by Michelangelo which Juan Bautista Franconio, a notable silversmith, moulded from the one he

brought from Rome". This new method became popular and found followers among other polychromers. Its importance lay in the fact that, while the flesh was painted in matt, the eyes were finished in the polimento technique, which made them appear lustrous. He recognised that the contrast between matt and gloss finishes gives greater realism to the appearance of a statue. His attention to such details as eyes shows how greatly aware he was of their role in transforming the image. He painted the irises brown against very white eye-balls and flecked them with highlights, making the eyes more expressive with a dark line on the lower lid, a reddened edge and a dark shadow in a fold of the upper lid.[42] He even painted the rays within the irises, added tears, and made sure that the skin colour matched the type and age of the person portrayed. But as the standard of sculptural finish varies, he recommended that if the polychromer had to paint a poorly carved piece of work he should still make use of polimento flesh tones because the shininess and brightness of "the flesh tones diminishes defects",[43] although he cautioned against using it on better works because of its heaviness and tendency to "mask the expressive quality of good sculpture".[44]

As much as Pacheco was critical of sculptors who relied on polychromy for covering up a bad job, he censored those painters who wanted to polychrome without having first acquired the appropriate skills. He rejected a generally held opinion that painters excellent in their own art can do any kind of painting and that, if they wished to paint sculpture, could do it better with their feet than those who have learned the skill. They are mistaken in this belief, he argued, because when they do it they lack the delicacy and neatness of those who deal with it all the time. This is because they disdain the practice and do not wish to make a study of it. There should be absolutely no doubt that the natural quality in a well-painted portrait head, and the way in which colours and highlights are used in the eyes and mouth to bring out softness of skin, can also be achieved most admirably on good sculpture – as, he says, all admit who have seen those painted by him in matt finish – "This is such a well-known fact that it excuses me from bragging."[45]

While Montañés probably agreed with Pacheco, his valued partner, in principle that those who polychromed statues should be suitably qualified and competent in their craft, he brought upon himself the wrath of Pacheco and others when he showed disregard for the ordinances of the guild of painters. The sculptor, ever anxious to have his work finished as he visualised it, had on one occasion taken it upon himself to employ and supervise polychromers, paying them a lesser portion of the fee than they might have earned had they been assigned the customary responsibility for

the job. A suit was brought before the *Audiencia* against Juan Martínez Montañés by Miguel de Güelles on behalf of the painters, and Pacheco, in their support, wrote an open letter "To the practitioners of the art of painting". What was at stake was their professional standing and their earnings, for hitherto sculptors and painters received equal pay. If anything, Pacheco pointed out, the polychromers deserved more pay and not less.[46]

Spanish sculpture remained dependent on polychromy even during the period when in other European countries monochrome sculptures were, for one reason or another, preferred and on the increase. No such drift and shift occurred in Spain; on the contrary. Colour was employed in sculpture in order to intensify and effect an ever greater realism by exposing human vulnerability and by exacting from the bystander an emotional response on seeing the (painted-in) tears, blood and sweat. The material origin of the figure remained well concealed under layers of paints and woven or brocaded clothing. If it is not the tears, it is the extravagance of patterns and colours that overwhelms.

Proske's description of the main retable of San Isidoro del Campo at Santiponco[47] by Juan Martínez Montañés (helped in the construction by Juan de Mesa and Francisco de Campos and finished in 1613) conveys admirably the rich scenario on display:

> The polychromy of these reliefs is splendid with harmonious colors and a wealth of brocade designs. Muted tones of red and blue predominate, lightened by the shimmer of gold in *sgraffito* designs and by frequent use of white on linings and on the angels' robes, made still gayer by sprigs of multi-colored flowers. In the Adoration of the Shepherds, the Virgin's dress is a soft shade of rose thickly covered with bold sprays of foliage in white edged with red, figures of cherubs entwined among them. Her cloak is blue with conventional foliage in lighter blue, and her monogram estofado in gold. On a wide border multi-colored flowers surround representations of sculptured fountains. Saint Joseph's rose-colored cloak also has a floral design interspersed with cherubs, but in a lighter shade of rose. The pattern of the lining is of conventional motives circling around foliage medallions centered with cabochons. The color scheme is subdued by the brown of the shepherds' garments *estofado* to represent coarsely woven cloth. In the Adoration of the Magi the Virgin's cloak has an unusually elaborate border of raised gold imitating embroidery, conventional flower and leaf motives drawn with delicate lines. The palmette on Saint Joseph's mantle is a pattern often used in Andalusian textiles and laces. It is combined with scrolled foliage and cherub heads, painted in rose color, blue, and white brightened by glimmers of the gold underneath. The Magi's garments are chiefly a dull red and blue with contrasting colors in the patterns except for the kneeling Magus, whose

> outer garment is a dark gray-brown with a pomegranate pattern in a lighter shade ... [48]

Pacheco's influence is also felt in this work. Besides altarpieces Juan Martinez Montañés produced a host of single statues of which many are now lost. However, his figure portrait *St Ignatius of Loyola* (1610) is still in the church of the University of Seville. It is recognised as a faithful likeness of the saint, for his death-mask also still exists[49] and the portrait is said to have been based on it. The sculptor only carved the head and the hands; the dress, which appears solid, is an original garment which was at a later stage stiffened with size and made to appear more substantial. Pacheco also refers to the head by Montañés,[50] acknowledging the part he played in giving the work its realistic appearance. Tears run down the cheek, the lips glisten with apparent moisture and the gaze is cast on a portable crucifix. The eyes are not yet of glass, as are those of many statues of the late seventeenth and eighteenth centuries, but painted in with highlights.

The tearful countenance of the soldier–saint raises the question: Is it really a realistic image? The historian Johan Huizinga maintained that the term "realism" is of little use in the art of sculpture. It would seem that the most supreme realism and the most absolute idealisation cancel one another out as soon as sculpture reaches a certain level.[51]

This image exemplifies the difficulty of classifying and labelling artworks which have been artfully made with great skill and expertise, but leave us not absolutely sure about the ideal aspired to. To the Protestant mind tears so demonstratively and permanently displayed are uncomfortable and an embarrassment; they defy the heroic and noble ideal. But then Spanish art, particularly of the period of the Counter-Reformation, is not Protestant art and therefore there is room for tears of compassion. Spanish sculpture moved more and more towards emphatic realism, pressing home a state of existence rather than a state of the absolute. It is in this respect that colour was an accessory to a development that remained outside the mainstream of European sculpture. Spain neither experienced chromoclasm nor iconoclasm, both of which might have undermined the painters' guild and their statutes. In fact, it seems that the stability, if not rigidity, of their system helped to preserve an industry which increasingly depended on commissions from the new world. The training and examination of polychromers and the quality checks of their products ensured that specialist skills were maintained to satisfy the steady flow of religious images to which newer saints were added as time passed.

Polychromy is the common denominator of much of medieval European sculpture. During the ensuing period colour continued to play an

important part in Spanish sculpture, while in Italy and north of the Alps either Renaissance ideals or the reforming spirit of the Protestant Church almost eclipsed colour.

Notes

[1] St John of the Cross (1542–91).

[2] Pygmalion's creation, described in Ovid's *Metamorphoses* (second century AD), which was published in Latin in 1497 (Venetian edition), and retold in the *Roman de la Rose*. The sculptor Pygmalion desired his statue of Galatea to come alive.

[3] In primitive cultures body-paint was not only applied for decorative purposes but functioned as a protection against the cold weather (Robert Brain, *The Decorated Body* (London: Harper & Row 1979).

[4] cf. H. Schrade in Jan Bialostocki, *The Message of Images: Studies in the history of art* (Vienna: IRSA 1988): "Judith was the patron saint of the *Schwäbischer Bund*, the league of the Swabian imperial cities, which the *Kurfürsten* of the Pfalz, Mainz, Trier, Hesse and Bavaria joined (founded 1488 and dissolved 1533)." Conrat Meit (*c*. 1480–1550) in an unprecedented invention stripped Judith altogether; his small painted alabaster sculpture is now in the National Museum in Munich. Conrat Meit of Worms, *Judith and Holofernes*.

[5] Regarding wood visibility, see the sculptors Riemenschneider, Syrlin and Stoss. See also Jörg Rosenfeld, *Die nichtpolychromierte Retabelskulptur als bildreformerisches Phänomen im ausgehenden Mittelalter und in der beginnenden Neuzeit* (Ammersbek bei Hamburg: Verlag an der Lottbek 1990).

[6] See Christine Göttler, "Die Disziplinierung des Heiligenbildes durch altgläubige Theologen nach der Reformation: Ein Beitrag zur Theorie des Sakralbildes im Übergang vom Mittelalter zur Frühen Neuzeit", in *Bilder und Bildersturm im Spätmittelalter und in der frühen Neuzeit*, Band 46, ed. by Bob Scribner (Wiesbaden: Harrassowitz 1990).

[7] Nicolas of Dresden, "Tabulae veteri set novi coloris seu cortina de anti christo" (1412); and *De Ymaginibus* (1417).

[8] The document was initially composed to clarify the position of the western church in response to the Byzantine iconoclastic controversy. With the publication of the *Libri Carolingi* reasons and objections voiced during the eighth-century iconoclasm were at last given a public hearing in the western church, since the many issues debated before were still relevant as they touched on fundamental issues of belief.

[9] See Helmut Field, *Der Ikonoklasmus des Westens* (Leiden: Brill 1990).

[10] Johannes Gutenberg invented movable type printing around 1439.

[11] Hans Belting, *Likeness and Presence: A history of the image before the era of art* (London: UCP 1994), p. 463.

[12] Jeffrey Chipps Smith, *German Sculpture of the Later Renaissance, c. 1520–1580* (Princeton: PUP 1994).

[13] St Castulus altarpiece of Moosburg, on which Leinberger employed twenty-three punch tools of different shapes and sizes.
[14] *The Fall* (*c*. 1525).
[15] Peter Burke, *Tradition and Innovation in Renaissance Italy* (London: Fontana 1974), p. 159.
[16] Charles Avery, *Donatello: An Introduction. Principal photographs by David Finn* (London John Murray, 1994).
[17] Now in the collection of the Museo Nazionale del Bargello. Avery noted that they would have made it look far less bland than it does today and would have related better to the ornamental style – now called International Gothic – which was much in vogue at the time. It would have resembled the young king in Gentile da Fabriano's (*c.* 1370–1427) *Adoration of the Magi* in the Uffizi Gallery.
[18] They were removed from these public places during the Florentine Republic.
[19] Avery (1994). p. 51.
[20] J. Pope-Hennessy, *Luca della Robbia* (Oxford: Phaidon 1980), p. 40.
[21] See Caroline Elam's introduction to Fabrizio Bandini *et al*., *Donatello at Close Range* (London: The Burlington Magazine 1987).
[22] cf. Cristina Donti, "Donatello at close range. An initial view of the restoration of the stuccoes in the Old Sacristy, S. Lorenzo, Florence," in *Burlington Magazine* 1987.
[23] cf. Jane Schuyler, *Florentine Busts* (New York: Garland Publishing 1976).
[24] Donatello apparently dipped a piece of cloth into plaster-of-Paris and arranged it like a garment.
[27] Rudolf Wittkower, *Sculpture* (London: Allen Lane 1977), p. 184.
[28] Roberto Weiss, *The Renaissance Discovery of Classical Antiquity* (Oxford: Blackwell 1969).
[29] cf. Pope–Hennessy (1980), Chapter 4.
[30] These were lead glazes made white and opaque by the addition of oxide of tin; and blue, turquoise and brown by the addition of other metallic oxides.
[31] See also Florentine relief – blue jars mentioned by Timothy Wilson, *Ceramic Art of the Italian Renaissance* (Austin TX: University of Texas Press 1987).
[32] See Chapter 8, p. 6.
[33] The fifteenth-century Flemish painters already emulated sculpture by painting figures in monochrome; see the Master of Flémalle, who painted a Trinity group in *c.* 1430 as if carved of stone (Städel Museum, Frankfurt).
[34] See his *Samson and Delilah*, National Gallery, London, and *The Reception in Rome of the Goddess Cybele*, Hampton Court Palace.
[35] Wittkower, p. 184.
[36] Ronda Kasl, "Painters, polychromy and the perfection of images", in *Spanish Polychrome Sculpture 1500–1800 in United States Collections,* ed. Suzanne L. Stratton (New York: The Spanish Institute 1993), pp. 33–49.
[37] Ibid., p. 38.
[3838] Ibid. p. 38.
[39] B.G. Proske, *Castilian Sculpture: Gothic to Renaissance* (New York: Hispanic Society of America 1951), p. 271.

[40] H.E. Wethey, *Gil de Siloe and his School: A study of late Gothic sculpture in Burgos* (Cambridge, MA.: Harvard University Press 1936).
[41] Completed in 1637/38, after thirty years' work, and published in 1649..
[42] B.G. Proske, *Martinez Montañés: Sevillian sculptor* (New York: Hispanic Society of America 1967), p. 45.
[43] Kasl, p. 36.
[44] Ibid., pp. 81 and 84.
[45] Quoted from R. Engass and J. Brown, *Italian and Spanish Art 1600–1750: Sources and documents* (New Haven CT: Northwestern University Press 1970).
[46] Proske (1967), p. 103.
[47] The retable is in Guzmán el Bueno's chapel.
[48] Proske (1967), p. 68.
[49] The death-mask is preserved in Rome in the Gesú church.
[50] *Arte*, Vol. 2, p. 104.
[51] See J. Huizinga, *Men and Ideas: Renaissance and realism* (London: Eyre & Spottiswoode 1960), p. 295.

CHAPTER NINE

BAROQUE AND ROCOCO: WHITE SCULPTURES AMIDST A BLAZE OF COLOUR

A true artist should put a generous deceit on the spectators.[1]

Historians of the nineteenth century began to refer to seventeenth-century art as "Baroque". Perceived as a new cultural phenomenon, its art forms invited comparison with the irregular pearl, albeit a small natural object. The eccentric shape of the stone was a reminder of the architectural and sculptural style of a spirited period. The Portuguese term *barroco*, which in that language originally referred to a small stone, then also to a type of pearl, may thus have been the chosen word for this new style. Equally, it could have derived from the name of the seventeenth-century Italian architect Giacomo Barozzi (called Vignola), or perhaps that of his contemporary, the painter Federigo Barocci. Now, as a term of reference, "Baroque" is not only applied to the visual arts but also to music, literature and philosophy.

The term "Baroque" has become an abstract concept, although the concrete image of the irregular pearl may be the key element in its meaning. This small, self-contained object helps us to see that even what is contrary to expectation – for example a perfect spherical shape – has an inner cohesion and through that displays some kind of regularity. The irregular pearl has a shape, a definable size, weight and colour, but it lacks one thing: perfect form. Is it therefore less beautiful? To the eye tired of regularity it offers diversion. To the mind that seeks perfection it probably acts as an irritant, as does the grain of sand in the oyster.

In trying to understand what the essence of Baroque art is, we must not overlook the fact that the oyster (to remain with our simile) provides a setting for the pearl. It is the setting as much as the object, whether pearl or sculpture, that is relevant when discussing polychromy during the Baroque period. Indeed, the first impact on entering a Baroque church or library, garden or residence is made by the sheer profusion of form and

colour. Once the eye has adjusted itself to the wealth of sense impressions, it becomes possible to discern individual shapes and colours and how they relate to one another. We take note of where the various shades are located, or how they envelop forms, enliven surfaces or are spread across space and create an impression of volume and depth or lofty heights.

Fig. 9–1 Baroque pearls.

One colour which entered into a new relationship with all others is white. During the late Gothic period white played a minor part in the various colour schemes, whether devised by Spanish or German polychromers. In Italy the situation was different. Luca della Robbia introduced a white glaze into his polychrome terracottas, sometimes combining just the two colours blue and white.[2] In his case the colour white became part of the "polychromer's palette" and continued the medieval tradition of colour in sculpture. During the Renaissance pure white marble provided substance and colour in one. Untinted Carrara marble statuary spread; form, not colouring, competed with drawing (*disegno*) .and strove for expression. Henceforth, white, or monochrome, sculpture became associated with antiquity and was thus idealised.

In Spain, where there was an almost instinctive reliance on polychromy, religious sculpture was unaffected by this new trend towards unpainted carvings as it spread from Renaissance Italy. Gold and brown tones, reds, blues, greens and flesh colours, they all blend together. Black and white were part of the palette and sometimes were allowed to override the chromatic range. The colour white has a legitimate presence for it represents the visible reality. But the profusion of colour and emulated texture within a cathedral or chapel almost lets one overlook the monochrome finish of a royal funerary monument such as that displayed

in the Carthusian monastery at Miraflora (Burgos). Below the huge altarpiece by Gil de Siloe and Diego de la Cruz is the elaborately carved double tomb of Juan II and Isabel of Portugal, also by Gil de Siloe. Late Gothic in style, the richly textured surfaces of clothes and pillows appeal as much to the beholder's sense of colour as does the polychrome altarpiece. (As both works are by the same sculptor they afford an excellent opportunity to study one's own response to coloured and non-coloured Spanish sculpture.) The omission of polychromy may at first puzzle. But could it be seen as a form of submission to the reforming spirit which made itself felt in Spain also?

In Bohemia, Austria and south Germany, the countries where polychromy was allowed to continue to flourish under the patronage of religious orders (for instance under the Benedictines), there is a notable shift in accent with regard to colour. On the one hand the painted figure still plays a major part, although the colour values are different from those of any preceding period. However, from the 1490s onwards monochrome statues also had a role to play in an ever richer display of form, movement and colour. Italy had passed on her taste for the white figure to the traveller and student from northern Europe, who faithfully incorporated it into his own designs of elaborate and colourful interiors of churches. There, like a pearl, the white figure blends in with the gold and the enamel colouring of the decoration. But, unlike the Italians who had white marble and appreciated it for its purity and untaintedness, the northerners made a virtue out of necessity by imitating what they did not have.

By emulating marble with polished stucco, white statues could be created. They were intended as monochrome sculptures and appear as such, particularly when seen isolated from their colourful setting, although while part of it whiteness contributes to the orchestrated display of colours. We sense some ambiguity taking hold of our concept of polychromy; while the figurative element of many German and Austrian Baroque interiors has been kept white it will, when seen in context, be experienced as belonging and adding to the multi-coloured design.

In Italy the situation is different. Here, too, we observe a fusion of colours achieved by the bringing together of various materials, with their own distinct colour values; white and black marbles for contrast, or bronze, silver and gold metal statuary set against a background of veined marbles of diverse shades. These are, for the most part, works designated for churches and chapels. On the whole, white marble was favoured for secular monuments and subjects based on classical mythology or historic events.

There is an apparent colour divide between the religious and the secular monuments, just as there is between religious statuary of one

confessed faith and another. In countries where the Protestant churches predominated, there is a general lack of colour in sculpture (if statuary was permitted at all inside chapels and churches). The eye adjusted to these austere measures and the faithful made a virtue of it as they, too, began to dress in black and expensive white lace.[3]

Niche figures in private libraries, garden statuary, and the sculptural decoration of staircases and halls are mostly based on secular themes. The choice of materials and their surface treatments suggest abundance and wealth. Stucco, white poliment, polymetallic finishes, polylithic carvings, material imitation of various kinds and, not least, lustre colours tell of an urge to go beyond the bounds set by the constraints of either convention or want.

In a combined effort architects, sculptors, painters and decorators had their individual gifts released into the creation of one gargantuan feast for the senses, and also for the heart. This was the outward sign of a renewed spirit of worship – glory be to God. The Counter-Reformation had a mission for the arts: to lift up the eyes and hearts of the faithful so that they might fully participate in the Eucharistic celebration. There is an energy and vibrancy that flows from the colours and forms, everything appears in excess, the cup is overflowing. The Baroque scenario provided the setting for a cathartic experience, but it was also a testing ground for beliefs, whether in what is visible to the eyes or in the faith one may hold. How the effects were achieved, by what means and not least, by whom, will be our concern in this chapter.

Not long after the Council of Trent (1545–63) had made the Counter-Reformation possible, Rome began to attract artists of the highest calibre, able to translate the spiritual into a visual manifesto through their respective media. In sculpture expression was given through movement, the staged presentation of subject matter which related to the church's more recent past. Colour was achieved by being sumptuous over the use of space and the types of materials employed. Without actually resorting to brush and palette, sculptors such as Gian Lorenzo Bernini (1598–1680) and the Frenchman Pierre II Le Gros (1666–1719) contributed to a colourful expression associated with the Baroque period.

To mention Bernini in this context may surprise, for none of his sculptures was ever touched by a brush, nor would he ever have consented to that. Indeed, it would have been abhorrent to him to use colour on marble sculpture or compose a figure of different marbles.[4] Yet colour was extremely important to Bernini, though never for the purpose of producing a life-like appearance. His chisel was his brush. Still, he was well aware of the problem of representing natural colours by sculptural means. Bernini

once explained:

> in order to represent the bluish colour which people have round their eyes, the place where it is to be seen has to be hollowed out, so as to achieve the effect of this colour and to compensate in this way for the weakness of sculpture which can only give one colour to matter. Adherence to the living model therefore is not identical with imitation.

Between 1657 and 1666 Bernini produced the Cathedra for St Peter's cathedral in Rome, of which the art historian Rudolf Wittkower wrote:

> One's first impression in front of the Cathedra is an intensely chromatic one: the beholder is struck by the interplay of multi-coloured marble, dark and gilt bronze, gilt stucco, and the yellow light spreading from the oval window. The compositional principle behind the use of colour here is obvious: the colour lightens and becomes ever more visionary the closer figures and objects are to the heavenly region. ... in a work like the Cathedra the polychromy has a supra-natural meaning and should not be mixed up with the realistic use of colours.

Wittkower then made a more general point about polychromy:

> It would be a mistake to associate such dazzling polychrome splendour with the love of the Baroque age for colourful magnificence. Multi-coloured decorations of monuments and whole chapels became fashionable in the Rome of Pope Sixtus V, towards the end of the sixteenth century. Much of the coloured marble that was used was taken from ancient buildings.[5]

Pierre II Le Gros, French by birth, who settled in Rome during the early part of his career, created a monument which shows the Blessed Stanislas Kostka on his deathbed. The 18-year-old Polish novice died in 1568 at the Jesuit novitiate beside Bernini's church of S. Andrea al Quirinale in Rome. In 1703 the Jesuit authorities, who commissioned the work, had it installed in the room which the saint had occupied. The Blessed Stanislas is seen lying on his bed, dressed in his clerical habit and holding a crucifix in his left hand, a rosary suspended from his wrist. With his raised right hand he is clasping a miniature picture. As if resting for a while, his head supported by pillows is turned away from the image, yet his open eyes are lifeless.

The realism of this image is heightened by its polychromy. Le Gros used white Carrara marble for the head, hands and feet, and also for the pillows. The habit of the Jesuit is of black Belgian marble. For the mattress he used a yellow stone (*giallo antico*), and for the throw covering the bed down to the floor he chose a stripy white, yellow to brown marble.

The whole stands on a green base (*verde antico*). Apparently the sculpture, while still in the then dimly lit, low-ceilinged room where the saint died, shocked many a visitor. On seeing on the bed the barefooted, black-robed figure they recoiled as at first they mistook it for a real corpse. (Now the statue is lit by electric lights that rob it of most of its suggestiveness.) But at the time

> the Jesuits were quick to grasp the value of this sense of the physical presence of death as an incitement of piety. It is so completely consistent with the methods used by the founders of their order, St Ignatius of Loyola. In his *Spiritual Exercises* the exercitant is continually urged to empty all his senses to create metaphysical reality in physical terms. The obvious fascination that Le Gros' statue[6] has for many people, as well as the repulsion it had for some (they speak of it as being "in bad taste" and "shocking"), in both cases owe a great deal to its macabre quality.[7]

Le Gros wanted the work moved into the church, but the Jesuits decided to leave it where it was. In the first instance that was on practical grounds; they argued that the harmonious interior of the church must not be disturbed, that the chapel was not of the right size for the statue and that there were not enough funds for redesigning the interior as suggested by Le Gros. Secondly, they recognised that the image had an unforeseen emotional if not spiritual effect on the onlooker because of the realism produced by polychromy and the intimate setting. The Jesuits saw it as justified to retain and safeguard this experience for the viewer and ignore the sculptor's own concepts and intention regarding this particular religious image.

The Cathedra and the *Blessed Stanislas Kostka* are indeed quite colourful works because of the masterly combination of either diverse materials (bronze and marble) or different-coloured stones. A third approach favoured by Italian Baroque sculptors was to combine either bronze and gold, usually in the form of gilt, or silver and gold or silver-gilt. In fact, silver had once more gained in currency as a medium for reliefs and plates or model-sized sculptures, calling to mind Carolingian reliquaries studded with precious stones or Roman vessels worked in relief. While a silver or gilt figure may by itself be classed as monochrome, when it is part of a larger assemblage of bronze and other materials the intention is that its own colour value should contribute to a polychrome design. In paintings silver is shown as either white or in shades of grey, and gold in yellow or yellow–white mixes. Thus, silver is related to white and both silver and white also to light. This is an important concept which Baroque artists had fully embraced, for they knew that the play of light on highly polished silver or white surfaces may,

in a certain light, almost gain a transubstantial quality because polish and reflection tend to diminish the characteristic colouring of a substance.[8] We need to come back to the silver figure and its model, which will be discussed in the context of German Rococo sculpture, when we study the significance of models and drawings to large-scale sculptures. But, firstly, let us focus on yet another material: stucco.

As a sculptural material stucco came into its own during the Baroque period. Stucco was, of course, successfully used during other times, notably during the pre-Romanesque period and also in Roman antiquity. The Greeks used stucco mainly as a coat or layer over which to paint. It is similar to plaster-of-Paris in that it starts as a soft mixture that hardens. It can be worked while not yet completely set solid and carved once it has become hard. It is more durable than ordinary plaster because of the admixture of lime and perhaps sand. It takes a polish which is known as white poliment. Why, we need to ask, did stucco become the material of the German Baroque?

Stucco has one notable quality: it can be made to look like other materials through the way in which it is finished. It is also one of the most adaptable and affordable materials. Depending on its finish, it can simulate the more costly marble or any other quality stone (and even bronze or gold). It is also a comparatively easy substance to work with. But this alone was not the reason for its choice in southern Germany and Austria during the late Baroque period. The Baroque concepts that spread from Italy northwards embodied the use of white marble, coloured marbles, bronze casting, silversmithing and gilding. The Italians had access to all these materials; the Carrara quarries supplied the best white marble, ancient monuments were stripped of their coloured marbles and silver poured into Rome whenever there was an appeal for yet another monument in honour of a former pope or saint.

Since the late Middle Ages artists from German-speaking countries had sometimes completed their education in Italy and thus new ideas travelled across the Alps. During the sixteenth and seventeenth centuries it was no different. A number of artists, and their future patrons, returned with a new vision and a feel for displayed grandeur after they visited Rome and its many churches. They absorbed some of the essential stage-crafts for bringing about the demonstrative, if not theatrical, aspect of the current liturgy and art. The Italian artist – whether architect, sculptor or painter – provided a permanent setting for enacting, or for the acting out of a new-found belief in the passion and glory of the Christian faith. This was the church as the bride, not a Lenten church as established by Calvin. What the northerners brought back with them from the south was a

renewed confidence in art and its purpose in effecting fulfilment in religion – a living faith for a living church. They also came in contact with humanism, which was generating more liberal ideas. The classical idiom had taken root and provided new images that began to alternate with those that were essentially Christian.

A number of sculptors engaged on projects in the Main and Danube regions of Germany now embraced the Italian style and accepted the white figure as fundamental to the elaborate designs which they were called upon to execute, although the polychrome statue continued to be part of many decorative schemes. Because of a dearth of good quality marble north of the Alps, especially the white but also the coloured varieties, the Austrian and German workshops resolved their problem by substituting and imitating materials they did not have. Stucco, or wood overlaid with stucco, became in their hands the material *par excellence* for highly elaborate decorations. It can be worked comparatively easily and allows open forms, undercuts and flowing shapes, although the finishing of stucco figures can be quite labour intensive. Every successive thin layer requires rubbing down with shave-grass or emery before polishing. While the minor decorative figures such as putti were often left entirely white, full-scale white statues were sometimes partially gilded, or polychromed.

Besides white marble used by the Italians and stucco in German lands, another white substance became available to the modeller during the late Baroque: porcelain, or Chinese clay, which was reinvented in Saxony and soon became popular also as a sculptural medium for mostly small-scale figurative work. Statues of stucco were sometimes painted in white and treated to give them a "porcelain-like" look.

Instructions about the finish of sculptures, whether for interiors or exteriors, sometimes made specific references to the type of material that was to be emulated – like marble, like porcelain, like stone, or like bronze, which of course implies that the base material was anything but marble, porcelain, stone or bronze. Before we realise it we are discussing monochrome sculpture, despite the fact that we started with the notion of everything being profusely colourful. This is one of the paradoxes of Baroque sculpture, for it takes us in and out of colour and, depending where, topographically, we start looking, we either see fully polychrome statues or find figures that are dominantly white yet contribute to the colourful setting. Or again, the bronze casts or stone monuments in public squares assume a neutrality as regards colour. Once we focus on monochromy, these works fall into their place as valid examples of "uncoloured" sculptures.

The history of sculpture is, by and large, also the history of colour in

sculpture. But the latter aspect of sculpture-making cannot be treated as something independent of this process, for it exists mostly as an attribute and not as an end in itself. When expressing a sculptural idea it is possibly colour (polychromy) but never form which can be dispensed with. It is then by intent that colour is marginalised or excluded from this process of conveying meaning. During the last five centuries the history of sculpture points to several periods when polychromy was omitted and then readmitted. During the Renaissance polychromy lost its universal appeal and importance. Then, during the Baroque period sculpture once again entered into a perhaps infidel relationship with colour. As we continue to trace the development of colour in sculpture, the account will reveal a growing bias towards monochrome sculpture. And so we need to keep in mind that geographically colour has deserted sculpture in many countries: England, France, The Netherlands, north Germany and Italy. Only Iberia and the southern part of central Europe were still receptive to polychromy although even there an increase of "whited" sculptures shifted the traditional meaning of colour in sculpture. We also need to recall how devastating the Reformation period was to sculpture. For example, the dukedom of Württemberg (which had become a Protestant country) was unable to, or not interested in, raising an artistic elite. A general lack of patronage and an outmoded guild system prevented a renewed budding of sculpture, let alone its flowering, unlike in neighbouring Roman Catholic Bavaria.[9]

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During the Baroque period, as before during the Renaissance, any historic survey of polychromy has to bypass the work of some of the most gifted sculptors of the time whose inventions of forms epitomise monochrome Baroque sculpture.

Neither Michelangelo nor Giovanni da Bologna (1529–1608) cared much for colour in sculpture. Bernini's attitude to colouring his white marble carvings is recorded and Alessandro Algardi (1598?–1654) produced mostly bronze sculptures. In England Grinling Gibbons (1648–1721) "painted" with his carving knife. The French sculptors Etienne Maurice Falconet (1716–91) and Jean-Baptiste Pigalle (1714–85) also continued the Renaissance preference for monochromy. In fact, in England and in France polychromy had altogether gone out of fashion, and in Italy monochrome sculpture was upheld as an ideal from the Renaissance with its rediscovery of antiquity. In Germany Andreas Schlüter (1664–1714), architect and sculptor, who came from the Protestant north, and Balthasar

Permoser (1651–1733), who trained in Salzburg and Italy, were both influenced by regional trends. The subject matter of the latter's Dresden statuary, and particularly his ivories, is suggestive of colour and fragrance.

In south Germany and Austria, where we shall remain for the rest of this chapter, colour made a unique contribution to the visual arts of the seventeenth and eighteenth centuries, and to the culture of these countries generally. It was the Roman Catholic Church that kept the door open to the arts and engaged some of the most gifted artists to translate the new-found vision of the church. In this way whole families and generations of artists helped transform a faith and a landscape, unlike in Württemberg, where there was not enough talent to choose from.

Sculptors Egid Quirin Asam, Johann Dürr, Johann Baptist Straub, Paul Egell, Joseph Anton Feuchtmayer, Johann Wolfgang von der Auwera, Johann Peter Wagner, Ignaz Günther and Ferdinand Tietz are some of the names which have become synonymous with Baroque sculpture. Their careers would sometimes intertwine – for instance that of Ignaz Günther, who was a pupil of Straub, and Peter Wagner, who carried on Auwera's workshop after his death. Egid Quirin Asam and his painter brother Cosmas Damian had been schooled in Italy. The skills they brought to their jobs were learned in workshops, but also sometimes in academies. Precise contracts but no cumbersome guild regulations provided the framework for their creative outpouring.

At Rohr in Bavaria (far away from Rome and St Peter's church, the centre stage of all things Baroque) one of the most breath-taking architectural and sculptural ensembles testifies to his training and to the artistic potential of Egid Quirin Asam. In the church of the former Augustinian foundation, the east apse is dedicated to one glorious vision of the Ascension of the Virgin Mary. Three distinct groups of figures are placed just above the level of the altar, which has been brought forwards into the transept. It is an overwhelming sight: around an open sarcophagus, with its oval-shaped lid removed, white figures representing the apostles gesticulate in amazement at the sight of the empty tomb and the ascending figure of the Virgin who, mid-air, is carried by two angels. She, in turn, reaches upwards, her gaze fixed on the light-flooded heavenly crown around which angels and putti on clouds are arranged. And higher still are figures of Christ and God the Father, united by holding out the Virgin's own crown. The dove, representing the Holy Spirit, hovers in space between the ascending Virgin and God, the Father and Son. The whole scene is framed by huge pillars of emulated coloured marble. Above the opened-up architrave and the ceiling, or heaven, more angels, clouds and golden rays fill the space. A round window set high into the wall of the

apse is paned with yellow glass.

The orchestration of the colouring is subtle and very effective. All earthly things, like tomb and architecture, are of darker shades which veer from a cool grey through a warm yellow-orange to a dark brown. The apostles and the angelic host, including the clouds, are pure white, and so is the representation of the Holy Trinity. The Virgin's mantle and robe and the wings of the two heaven-bound angels are partially gilded. All accessories, a rose held by an apostle, the crown, the Virgin's belt and her grave cloth, appear swirling around as if set in motion by a wind, or by the Holy Spirit. The big crown and the capitals and other decorative features are all golden. The whole scene seems ablaze with light and colour.

The materials are limited to coloured and white marbles and to gold, or so it seems, for what really has been used was stucco, supported by wood, paints and gilding. If we take the figures on the ground and those near the ceiling, they are plainly monochrome; only the centre group combines white with gold. As the figurative and the architectural elements belong together, the whiteness of the statues has to be seen as a distinct colour value rather than as an uncoloured substance. In fact, the polychromy of the apse is far more subtle than one at first realises. The yellow light that floods in from the round window also casts a warm glow on the smooth surfaces of clouds and heavenly creatures. The marbling of the columns brightens when flooded with light from the windows in the aisles but becomes almost heavy when in shadow. A closer look reveals other touches of colour: the dove has all the characteristic colourings of a real dove, red feet and beak and dark beady eyes. The putti, too, are far from being dead white but have painted-in eyebrows, eyes and mouths, and some even have rosy cheeks. The faces of the apostles also come to life because of the delicate colouring given to their eyes and mouths. The same applies to the Virgin. And the gilt pattern on her dress and mantle emulates costly brocade materials.

For comparison's sake we turn to a later work by Egid Quirin Asam. In 1722/3 he was still in Rohr; twenty-four years later he was called to Sandizell (1747/8). The two places are a day's walk apart and not far from Ingolstadt in Bavaria. The new work involved the making of a cathedra not unlike the one by Bernini at St Peter's in Rome for the monument of Pope Urban VIII. With Asam's creation the feast of St Peter's accession to the apostolic throne at Antioch was to be celebrated. Again, it is a sculptural display within an architectural setting, with much additional decoration. Everything comes together into one; in its superfluity nothing is superfluous. The white centrepiece, the papal figure in front of a huge upright oval window, attracts the visitor's attention. The colour scheme is

once again based on a triad of white, gold and pink which orchestrates form and content. The pink colour of the twisted columns and the base of the throne and the golden aureole with its calmer centre of opaque glass let the whiteness of the figures appear harder, yet also daintier, like porcelain figures. The colours appear to have symbolic significance: white for purity and absolutism, gold for eternity and pink perhaps for the morning sun. The putti are flesh coloured, but the pope's face is white, as are his garments with their gilded edges.

For the church of St Margarethe at Osterhofen on the Danube the two Asam brothers, the painter Cosmas Damian (1686–1739) and the sculptor Egid Querin (1692–1750), worked together. It is a commission which takes us back a decade (1734). Although they were responsible for the decorative programme of the whole interior of the church, it is the polychromy of the statuary in the chapel of St Norbert of Xanten that deserves a closer look.

At first glance we recognise at least two qualitative differences from the other two works: firstly, there are more hues employed and, secondly, all the coloured surfaces have a distinct lustre. Fully coloured are now also a host of frolicky putti; flesh colour, gold, red and silver give them substance. The clouds are also silvery. The non-functionary altar of the composition is made up of seemingly black marble, gold, silver and lapis lazuli. The vestments of the saint are those of a cardinal: a red cape over a gold-embroidered alb and white cassock. An angel of similar size wears a black satin robe lined in cardinal red. The two twisted columns framing the chapel are marbled grey and yellow. There is a profusion of detail, which gives a sense of overcrowdedness. In this display of colour the emphasis is on material quality and on lustre.

The three selected works by Egid Quirin Asam, of which two were probably polychromed by his brother Cosmas Damian, introduce us to a number of important developments with regard to the techniques and the intention for employing these. There is no doubt about the intention to create and to maximise the effect each work was to have on onlookers. They are evocative visual displays which not only were meant to appeal to the senses and to the emotions but, more importantly, were also to engage viewers at a spiritual level that would lift them out of their lowly self-esteem and transport them from a sinful into a glorious realm. Thus, they were encouraged to become involved in a dramatic scene and to identify themselves with an event that was to challenge them morally and spiritually.

Each staged scenario seems to have borrowed heavily from the stage-crafts of the theatre, where much depends on creating an illusionary,

make-believe environment in order to prepare the viewer or to support the cast and their performance. The props and the backdrop, the clothes and the make-up, are designed to agree with the roles. From a distance everything begins after a while to look real and convincing and the spectator can let go, forget himself or herself and be taken in by the event.

At Rohr, Osterhofen and Sandizell we see what appears to be the finest marble, white and coloured; we notice the presence of lapis lazuli, gold and silver, also the satins and damasks among ivory and porcelain. These are the material riches of this world, and we believe what we see. Yet the technical textbooks of the early eighteenth century advise us to take another look and to note how the painter or polychromer achieved such close resemblances to genuine materials, for what is in front of our eyes is nothing more than imitation. In effect, we are being introduced to the practical knowledge of how to emulate and imitate any substance by means of simply colouring or polishing the surface of stuccoed figures or decorations.

In German-speaking countries technical manuals and contracts of the period refer explicitly to all kinds of imitations that had become *à la mode*. Phrases such as *nach Marmor-Arth*, *nach Porcelain-Arth* and *nach Silber-Arth*, to mention just some, describe the kind of material to be imitated or what the outcome should look like: marble, porcelain, silver. The conservator Ulrich Schiessl, who more recently studied closely this phenomenon of visual illusion and material substitution, will be our guide here.[10] But, firstly, the technique of working in stucco over cheaper material such as travertine, which in the past served as a base for decoration in relief and paint finish, was known and described by Giorgio Vasari. North Italian stucco workers brought their skills across the Alps at the beginning of the Baroque period, and from there the technique began to spread more widely. The Germans were already familiar with and receptive to coloured marble imitations.[11]

The look of white marble, especially the pure type found at Carrara, was closely matched by a technique which in German is called *Weissfassung* (white paint finish). This involves white poliment and was achieved by polishing the surface again and again after each of several layers of stucco or plaster.[12] A coat of white paint may finally be applied. Depending on the type of white material to be emulated (Carrara marble, alabaster, stucco, ivory or porcelain), the white pigments of chalk or lead-white may either be made into an emulsion or suspended in oil, wax, resin or water, for it is the binding agent that gives the coat its characteristic quality.[13]

The imitation of porcelain is particularly interesting, whether glazed or

unglazed – for example as biscuit ware. Chinese porcelain was already known in Europe in the seventeenth century and greatly admired long before, in 1708, Johann Friedrich Böttger – a chemist from Meissen – succeeded in producing the "white gold" or porcelain. In fact, in 1696 – that is, a decade before Böttger (re)invented porcelain – an instruction manual (*Kunst und Werck-Schule*) appeared in Nuremberg. It advised how to prepare and apply white poliment in imitation of porcelain. In 1710 the interior of the Gartenpalais Schönborn, near Vienna, was decorated in this manner. For the production of actual small-scale porcelain sculptures, we have to wait until 1727 when the Meissen porcelain factories began to employ their first professional sculptor. But success came only with the engagement at Meissen in 1731 of Johann Joachim Kändler, who was trained in the tradition of the late Baroque sculptor Balthasar Permoser (d. 1732). Franz Anton Bustelli, the other named person associated with porcelain figurines, worked for the porcelain factories at Neudegg and Nymphenburg.

It was the delicacy of the material that appealed to the late seventeenth- and eighteenth-century taste and the finish *nach Porcelain-Arth* became well established in the painter's repertoire. While in the German porcelain factories the small-scale figurines were, on the whole, painted in colours before glazing, the French manufacturers at Sèvres preferred a white finish. Indeed, to remind ourselves, it is the whiteness and the brilliant glossy glaze of the porcelain to which the term "porcelain-like" alludes.

Porcelain figurines influenced other areas of sculpture also; their style and subject matter is reflected in many large-scale statues produced for palatial interiors and gardens, although the reverse was also sometimes the case – that is, porcelain figurines were the source of inspiration for large-scale works.

Colour was not entirely sacrificed to white finishes of sculptures, as we have already observed in the chapel of St Norbert of Xanten at Osterhofen, for which the Asam brothers were responsible: the brilliance and depth of applying glazes; the vitreous, glossy surface resembling that of painted porcelain or enamel. The transparent glazes allow the light to refract and illuminate the colour underneath, giving each shade its rich, satiated appearance. The lustre technique, with which it may be compared, is however different in so far as pigmented glazes are painted over a metallic ground – for example silver or gold, or tin substituting for silver.[14]

The imitation of metallic colours is yet another technique that came into its own during the high Baroque period. More needs to be said about this, but first let us examine the effect of white stucco and polychromy where they were combined to varying degrees.

Stucco was the main material for a number of south German sculptors and decorators, although they were often also competent wood carvers. Some of them were trained at the Wessobrunn school for stucco workers, near Lake Constance. Such trades or occupations sometimes ran in families, as already noted, including in-laws or cousins (e.g. Zimmermann and Schmuzer). On large projects members of different workshops occasionally collaborated.

Johann Joseph Christian (1706–77) and Joseph Anton Feuchtmayer (1696–1770) were just two of several leading Baroque sculptors. Their names are linked with places such as Birnau, Zwiefalten and Ottobeuren. For the church of the Benedictines of Ottobeuren J.J. Christian created a number of oversized figures of apostles and a guardian angel (*c.* 1765). The representation of St Paul, to focus on one statue, is entirely in white stucco except for the attributes of book and sword, which by way of their coloration draw attention to his apostolic status. The *Guardian Angel and Child* group also gives the impression that white marble had been employed. The adjoining decoration is, in contrast, very colourful. Material imitations of blue cloth, red marble and golden branches all blend together, and amid the rocaille and twirls play flesh-coloured putti with wings, who have escaped from the nursery. Feuchtmayer was also responsible for the pulpit in the same church, which is set against a coloured, or marbled, wall. There again, the sculptural elements are white, whereas everything else is gilded or coloured. As with an illuminated book where the decoration has the colour whereas the message (the written or printed word) is kept monochrome, so the representations of messengers and saints are in white for better reading. Still, each interior is the result of ideas and taste unique to it. In 1760 Feuchtmayer fashioned a figure of St Lawrence for the high altar at the Franciscan church at Überlingen. The wood carving was given a white and gold finish. Any flesh colouring was omitted. The almost monochrome image lifts the homely picture one may have of the humble and domesticated brother into the realm of sainthood and holy innocence.

White also suited the allegorical subject matter of *Chronos*, which another important sculptor, Ignaz Günther, carved between 1765 and 1770 and which was once part of an encasement for a clock.[15] The colour white introduces an abstract element, detachment from all living things. The two symbols, the hour glass and the scythe, remind us however that life has a cut-off point. It was a deliberate choice, for Ignaz Günther's best-known works are vividly coloured; his *Pietà* of Nenningen (1764), the *Annunciation* group (1764) and the *Guardian Angel* (1763). The last of these helps us to realise that a child's trust in his guardian angel may well

depend on realistic colouring of the flesh, on beauty that emanates from the angel's presence, for who would wish to place a hand into that of a bloodless creature?

In 1951 the work of Ignaz Günther (1725–75) was on show in Munich. For the visitor it was quite an experience to see how all-embracing polychromy was during the Rococo. A large part of each of Günther's figures was painted white, some with a little gold for accent. A portion of the exhibits was however completely coloured and a small number of figures were either painted in gold or covered in silver leaf. One visitor, the art historian Egon Kornmann, observed that the chromatic colouring of Rococo figures was not always satisfactory, particularly when the painter tried to adhere to the older style of delineating colour areas, of emphasising single forms (e.g. eyes, mouth or hair), which is contrary to the Rococo style of modelling with its "fluid", form-in-form transitions.[16] Only time-worn coloured polychromy assists in creating this effect. In this respect, a monochrome finish, whether gold or white, was perhaps more congenial to the Rococo form as a single colour draws together and contains each sculptural entitity. Any part gilding was usually successfully applied either to attributes or to some decorative feature of dress.

Nikolaus Pevsner, on visiting the 1955 exhibition "Rococo Art from Bavaria" at the Victoria and Albert Museum in London, compared the polychromy of the Rococo with that of the Middle Ages:

> those who insist so much on the superiority of art of the Middle Ages over that of the Baroque, forget that medieval sculpture was as fully painted as in the Rococo exhibition, and certainly not more sparing of silver and gold. The colours, of course, differ. The Middle Ages, with their more solid and down to earth art, liked blue and red and green, whereas during the Baroque and Rococo the styles brightened and became lighter by embracing white and heliotrope and a pale silvery green.

Every now and then a major exhibition brings together art objects, thus allowing a reassessment of a period or style or of the work of an individual artist. The 1955 exhibition of Baroque and Rococo art brought polychrome and monochrome sculptures together for the first time:

> We are so used to appreciating sculpture in monochrome that we are inclined to call, without hesitation, all coloured sculpture vulgar and sensational. Yet here the absence of colour certainly made the figures look stark. That was all the more remarkable, because the coloured figures were deprived of their natural setting and ought, one would think, to have suffered from that. Baroque art, that is its outstanding quality, is art of the assemblage[17] more so than any art had been before. Architecture, decoration, sculpture, and painting all combine to achieve that glorious

> *unisuno* which is the Italian and German church of the seventeenth and eighteenth century …[18]

Sketches and drawings of pulpits, altarpieces and figures form yet another part of the creative legacy left by Ignaz Günther. These are of a very high quality; indeed, they are works of art in their own right. Drawings and models and also contracts reveal something of what was intended if not always achieved. They document the early stages of a process which may have involved other hands before the work was finalised and accredited to the master with whom the contract was drawn up. He may not necessarily have been identical with the person from whose hand we have the sketches or model.

The question which is of interest here is who was responsible for the colour scheme of any sculptural work and at what stage it was decided upon. From the sculptor's point of view such a decision need not be made until he has completed the work. On the other hand he was now often called upon to produce designs for larger sculptural and decorative assemblages, especially for sacred interiors. This required thinking also in terms of colour distribution and colour effect. For example, August Joseph Demmel was one of at least nine different painters who worked for Ignaz Günther.[19] As a court artist he painted frescoes for the ducal residences and he was also engaged as a stage designer for the Residenztheater in Munich. He was well qualified to execute the polychromy for sculptures intended for a theatrical setting, as church interiors had become. He must have been able to visualise the effect a polychrome figure was to have when seen from a certain position. And it was the position, the setting, that mattered to the final finish of sculptural works of the Rococo.

Sculptors such as Ignaz Günther, Johann Baptist Straub, Paul Egell and perhaps less so Balthasar Permoser (to mention just one artistic lineage) were also designers whose drawings of altarpieces and pulpits are indicative of their preoccupation with colour. Ignaz Günther, whose drawings have been collected and studied, introduced colour as he saw fit for the purpose of the design. For the above mentioned *Guardian Angel* altarpiece of 1763 (formerly at St Nicholas's church and now in the Bürgersaal of Munich) he made a pen and ink drawing on buff-coloured paper. Against a salmon-pink backdrop he placed the monochrome sculptural group enlivened with brushed-in grey shadows. Touches of yellow or gold were added to the rays emanating from the Trinitarian symbol of an eye within a triangle and to the hair and dress of the child.[20] An even more colourful design made for the pulpit of the monastic church of St Max in Munich (*c.* 1760, now destroyed) shows an extended array of colours: ochre, green, blue, red, gold and touches of black for

accessories.[21] Indeed, it may have been the sketch for a painting.

Designs for elaborate altarpieces or pulpits are more akin to architectural designs as they present an elevation of the structure and its decorative elements. They were often on coloured paper, or a colour wash was applied to allude to space and atmosphere. The purpose of these drawings was, of course, to help visualise a concept that needed to be discussed with the patron and co-workers for the project. It became customary to draw and colour one half of the design as fully as possible, but leave the other half in outline from which detailed information about the technical construction could be read off. Ulrich Schiessl pointed out that this type of drawing often incorporated some indication of the colour scheme, which was usually further explained in an accompanying text (*Begleittext*).[22] In Franconia such written instructions were quite precise about polychromy. It is from these that we learn about the various imitative finishes.

The commendable drawing style employed by Günther and Straub must not distract us from the fact that, on the whole, sculptors tend to relate to form rather than to colour or surface texture, and hence their sketches often reflect their concern for outlines, shapes, proportions and movements, while colour is treated as an incidental. In any case, the flat drawing only offers a limited viewpoint; hence the making of models (*bozzetti*) which permit the object to be seen from all sides.

There are two types of model produced by sculptors which demonstrate how they relate to polychromy and to our knowledge thereof. On the one hand there are the clay or wax sketches which are often no higher than 30 cm and require scaling up. They vary from very rough sketches to fairly detailed representations. The other type of model is of wood and of the intended scale for the final work. The goldsmith or silversmith required such models for the replication of figures or busts in his medium. He had also to attend to the finer details and extras which were omitted on the model.

Let us stay with the wooden model (and its final outcome in precious metal), for it was the carved model which was usually also kept for display. E.B. Bendl, a sculptor from Augsburg of the generation of Paul Egell, produced in 1714 the wooden model for a *St Sebastian*. The silversmith J.H. Mannlich, also of Augsburg, made the silver replica during the same year. On first sight the model and the final work seem to follow two different concepts: Bendl's version, now polychromed, appears realistic and down to earth, due largely to its opaque colouring. The silver statuette (to which more detail such as arrows, halo, branch and helmet had been added) seems almost to have expanded due to the light which its

highly polished surface reflects. The silver was probably varnished in order to prevent it from blackening.

Several wooden models of saints by Ignaz Günther are still extant. The now raw-looking limewood carvings of four of these models were once covered in silver leaf in imitation of the precious metal.[23] While still covered in silver leaf, the models were probably on display on weekdays but exchanged on feast-days for the real and more precious silver busts, as was customary during the Middle Ages.

Egid Quirin Asam has been introduced earlier as a sculptor of stucco, yet he probably also produced a wooden model for a silver reliquary bust of St Anastasia for the parish church in Benediktbeuren (Bavaria). The colour effect was achieved firstly by using gold and silver adroitly side by side and then by enhancing the dual colour value by further means: matt and polish. For instance, her hair is of gold which was made matt by using a fine punching tool. Characteristic of the period is the lustre effect of the eyes and lips, which have been painted in colour over the silver.

The collection of *bozzetti* at the Mainfränkisches Museum in Würzburg is a unique record of the working method of several important sculptors active during the eighteenth century in Franconia. Among these are Ferdinand Tietz (1708–77) and Johann Wolfgang von der Auwera (1708–56). Around the year 1738 Von der Auwera made the clay models of two figures of saints, Peter and Paul, for Worms Cathedral. For each figure the drawing, the clay model and the statue exist. For the models red clay was used, which was lightly fired, then painted with a grey oil colour; the figures however were gilded or made to resemble marble. To assist with the scaling-up the model was squared with red chalk and lead pencil. The painting of the model may have served a double function: to change the unwanted brick colour to a more amenable shade and to enable the lines to be seen when it came to the enlargement.

The model (1748) of the *Rape of Proserpina* by Ferdinand Tietz is a limewood carving, as in fact are all his models in the museum. This composite model is gold coloured; it has the flair and delicacy of a goldsmith's work. However, the sculpture for which it served as a model is a sandstone carving and one of a group of four produced for the summer residence of Seehof near Bamberg.

Another Tietz model belonging to this group was based on the allegorical subject *Neptune and Amphitrite*. It is fully polychromed. This small-scale work (43 cm) has however the quality of a porcelain table-piece. The transitions from one shade of colour into the next support the organic growth of figures and composition. Form and colour harmonise and blend as if glazed and fired. The full-scale work, now lost, was not

given the same colouring as seen on the model, for the four pieces were painted white in 1749. But another large sandstone carving, a *Parnassus* group (1766), was once covered in gold or, more likely, in yellow paint,[24] and surrounded, as it still is, by the water of a lake in the park of Schloss Veitshöchstheim near Würzburg. A later description (1830) refers to its "burlesque" appearance due to the (figures of) muses wearing colourful contemporary costumes.[25] Perhaps a porcelain figurine such as Franz Anton Bustelli's *Leda* (*c.* 1760)[26] or J.J. Kändler's colourful depiction of *Beltrame and Columbine* (*c*. 1740–41)[27] inspired Tietz.

Ferdinand Tietz, who came originally from Bohemia, where he received his training in the workshop of Matthias Bernhard Braun (1684–1738), created – like Permoser for the Zwinger at Dresden – the garden sculptures for the parks of Seeheim and Veitshöchstheim. As far as can be ascertained, most of them were painted. At Seehofen the statues were repainted forty years later, the first half in 1784 and the second in 1785, according to a report drawn up by the court gilder Andreas Möller. Each sandstone carving had to be coated twice with oil for protection. For the first coat fine lead-white suspended in oil, which he referred to as "silver oil paint", was to be brushed on; the second coat was to be a light slate (*Schieferweiss*), which he also described as silver coloured (*silberfärbig*). The aim of painting these outdoor sculptures was twofold: to protect the soft sandstone against the influence of all weathers and also to "ennoble" the material by imitating either the quality of white marble or the more precious appearance of porcelain, which Möller compared with mother-of-pearl. Indeed, the type of paint he had in mind may have been a white pigment made by crushing either pearls or oyster shells, a method recommended in two eighteenth-century English handbooks for artists: *The Art of Drawing* (1731) and Robert Dossie's *Handmaid to the Arts* (1758). Both of these are mentioned by R.E.D. Harley (1970), who described eight different whites and their English documentary sources.[28] While this type of paint may have been ideal for the illuminator, the texts do not state whether it also suited the polychromer.

However, the eighteenth-century painter employed to give the appropriate finish to the statuary had a far more challenging task than his predecessors of the late Gothic period. He was to imitate material characteristics by applying ground pigments and glazes, metal foils or metal powders. Layer upon layer, translucent, matt or polished, each surface was finished in a certain technique developed in order to satisfy a specific effect. Meanwhile the sculptor continued to use traditional materials, such as stucco or limewood, in the confidence that the painter's art would transform wood into bronze or silver or gold, and stucco into

porcelain or satin and brocade, or that the wooden model would produce a fine silver bust in the hands of the goldsmith, who in turn would let the painter give the finishing touches to eyes and mouth – for which he may be paid not quite a florin.[29] [30]

To the beholder it is the surface and its effects that matter, not the answers to probing question about which materials or pigments were used that are so important to the restorer. In 1731 Paul Egell carved the figures and reliefs for an altarpiece of the Immaculate Conception for the Dome in Hildesheim in north Germany. All images and ornaments were, according to the contract of 1729, to be gilded and bronzed (*vergulden und bronzieren*).[31] The finish of the figure of St Joachim seems more that of copper than of bronze, for leaves of copper were laid over yellow poliment.

According to Schiessl, in south Germany there are few if any known contractual documents concerning sacred interiors which would have required bronze imitations. This underlines the regional preference for white poliment or chromatic colouring. Once again we note the north–south divide, or perhaps the Protestant and the Roman Catholic preference as regards polychromy. None of Paul Egell's works was originally coloured in chromatic tints, yet the work of his former pupil Johann-Baptist Strauss and that of his one-time journeyman Ignaz Günther was often fully polychromed. They were both working in Bavaria and engaged by Catholic patrons.

An allegorical figure from the Paderborn Liboriusaltar (1736), which is now in the Paderborn Diozesanmuseum, may serve here as another example of the introduction of colour into sculpture without touching a brush or relying on pigments: the multi-metallic image. The concept is not dissimilar to creating polylithic sculpture, for in both instances polychromy is achieved by relying on the variances of a class of substances when composing a multi-coloured image. The Paderborn statue appears to be made entirely of metal. The figure is covered in gold leaf and foils made of several types of metal. The combination of the golden, silvery, reddish and yellowy shades clothes her fully in colour. The statue is ennobled by materials that refer to luxury but not as obviously to sensual qualities as bright colours or flesh tones might have done. The assembled metals have here become an alternative to a monochrome bronze cast; yet if compared with Asam's or Günther's polychrome figures there is also restraint, a toning down, an absence of bright shades. In whatever light and at whatever angle the altarpiece was seen, it presented a compromise but also a new departure; the colour values of the metals enriched the palette and provided an alternative to shades which allude to the flesh.

Bronze, an alloy, varies in colour from a yellow-pink to a dark grey, depending on how much tin is added to the copper.[32] The colour values associated with metal are of two kinds: firstly, the colour of the metal itself, for instance the red of copper; and, secondly, the gradual change of metallic surfaces known as patina. Gold is the exception, for it remains bright. This quality of staying incorruptible is of symbolic significance. The green or black patinas on bronzes however are signs of an ageing process or, when imitated, a matter of taste.

During the late Baroque period the preference still was to preserve if not to heighten the bright bronze colour with a coat of a golden or pink glaze that gave the cast its lustre. In cases where bronze was to be imitated, yellows and reds rather than greens were used as undercoats on stucco or gessoed wood, giving the surface its final matt sheen.[33] Of course the various shades of patina found on antique sculptures were soon also to be imitated as interest in antique bronzes expanded (for more about this, see the next chapter).

The history of polychromy reached one of its high peaks during the period between the sixteenth and the eighteenth centuries, although only in certain geographical regions such as Spain and the southern German-speaking countries. Their church and court patronised the excesses of the imagination; they left a legacy now shared between the local tourist boards and the institutions responsible for the care and maintenance of countless works of art. It is from the *Kunst-und Denkmalpflegeämter* that we learn of the difficult problems restorers are faced with, of the costs involved and the patterns that emerge, notably as regards workshop practices and colour shifts. Any stylistic interpretation is at this stage conjectural rather than conclusive as much more work needs to be done. However, as scholars concentrate on often quite specific problems their research enables them to determine the various developments. In 1982 the Austrian conservator Manfred Koller published his findings relating to the development of Austrian Baroque altars and sculptures, for which he prepared two tables that indicate the preferences of various colours at given periods within the time-scale of 1600–1800. They also show the observed combinations of colours, as regards either sculpture or sculptures in relationship to architecture. For instance, in Tyrol before the mid-seventeenth century monochrome – unpainted sculpture within a plain architectural setting – was still to be seen beside pieces that had been painted in flesh colours, gold for draperies with patterns (stripes and flowers) and pigmented glazes.[34]

White was introduced by around 1675; this applies to interiors as well as to sculptures, particularly in Protestant areas. Six or seven decades later

various colours, some in imitation of marbles, provided the polychrome backdrop for sculptures that might still be just white, or be combined with gold or any other colour values. While white remained important right to the end of the period, gold was dropped a quarter of a century earlier. Silver as a shade was favoured for only a limited period (about 1675–1760); this also applies to bronze colouring (1700–60). Flesh colours continued to be applied until the 1770s where white was not the dominant factor. The durations for practically all the techniques and colour combinations mentioned being in evidence were short and cover the first half of the eighteenth century.

The prominent role white played during the latter part of the century was on two accounts: chromatic shades were omitted, and white was used as a neutral colour. Figures which were part of altarpieces had to be white-washed and overly colourful altars toned down.. White stucco and matt white biscuit porcelain finishes were at last containing the blaze of colour before a new *zeitgeist* rendered polychromy more or less obsolete.

Notes

[1] Edmund Burke (1729–97), *Philosophical Inquiry into the Origin of our Ideas of the Sublime and the Beautiful: With an introductory discourse concerning taste.* (1899: IX). The full quotation reads: "A true artist should put a generous deceit on the spectators, and effect the noblest designs by easy methods."

[2] See the *tondi* made for Brunelleschi's foundling hospital in Florence.

[3] Notably in Spain and in the Netherlands.

[4] R. Wittkower, *Bernini* (London: Phaidon 1997).

[5] Ibid., p. 183.

[6] Francis Haskell, "Pierre Legros and a statue of the Blessed Stanislas Kostka", in *The Burlington Magazine,* no. 97 (1955), pp. 287–289.

[7] See *Italy and Spain: 1600–1750. Sources and documents*, eds. Robert Enggass and Jonathan Brown (New Haven CT: Northwestern University Press 1970), pp. 59–62.

[8] cf. Karl Bühler, *Die Erscheinungsweisen der Farben* (Jena: G. Fischer 1922), Chapter 20, "Der Glanz". As a spotlight falls on a highly polished metal surface the colour there reflects white light, thus obliterating the true colour of the metal.

[9] Werner Fleischhauer, *Barock im Herzogtum Baden-Württemberg* (Stuttgart: Kohlhammer 1958).

[10] Ulrich Schiessl, *Rokokofassung und Materialillusion: Untersuchungen zur Polychromie sakraler Bildwerke im süddeutschen Rokoko* (Mittenwald: Mäander Kunstverlag 1979).

[11] Giorgio Vasari, *Vasari on Technique*, transl. Louisa S. Maclehose, ed. G. Baldwin Brown (New York: Dover Publications: 1960).

[12]Jean-Félix Watin (1773, 3rd edition), *Weisspoliment*. He mentions eleven layers, each one being polished with water and brimstone powder.
[13] Erwin Emmerling, *Über weisse Fassungen* (Kunstakademie Stuttgart Institut für Kunsthistorische Technologie 1977).
[14] Johannes Taubert comments on the fact of creating metals that do not exist.
[15] Bayerisches Nationalmuseum, Munich.
[16] Egon Kornmann, *Kunst und Leben. Gesammelte Aufsätze*, ed. Hans Hermann (Ratingen: A. Henn 1954).
[17] This kind of assemblage is known in German as *Gesamtkunstwerk*. See Bernd Euler-Rolle, "Kritisches zum Begriff des Gesamtkunstwerks", in *Theorie and Praxis*, *Barock* series, Kunsthistorisches Jahrbuch, Vol. 25. (Graz: 1993), pp. 365–374.
[18] Exhibition catalogue, Victoria and Albert Museum, London (1955).
[19] G. Woeckel, *Ignaz Günther* (Regensburg: Pustet 1977), Chapter 9.
[20] Ibid., cat. no. 61.
[21] Ibid., cat. no. 49.
[22] Schiessl, p. 18.
[23] See Karin Stober, *Von allen Seiten betrachtet: vier Heiligenfiguren von Ignaz Günther* (Karlsruhe: Badisches Landesmuseum 1988),
[24] It was probably mosaic gold, a yellow paint, gained from mixing tin and sulphur (SnS_2).
[25] See Wolfgang Lindemann, *Modell und Ausführung: Probleme der Werkgenese im Oevre des Ferdinand Tietz* (München: Bayerisches Nationalmuseum 1986) footnote 174.
[26] Bayerisches Nationalmuseum, Munich, inv. no. 68/52.
[27] Victoria and Albert Museum, London.
[28] R.E.D. Harley, *Artists' Pigments*, *c. 1600–1835: A study in English documentary sources* (London: Butterworth 1970).
[29] See Ignaz Günther's *St Ananaeus*.
[30] For payment for the lustre colour of eyes and mouth: fl. 15. See Mane Hering-Mitgau, 1986. Vom Holzmodell zur Silberplastik. Paper read at International Colloquium: Entwurf und Ausführung in der europäischen Barockplastik, at Munich.
[31] Schiessl, p. 74.
[32] See Schiessl's reference to Robert Mallett (1842). While 90.1% copper content gives bronze a reddish tinge, 87.7% turns it yellow and at 68.21% it becomes ash grey. The quality and workability of the cast changes accordingly. Similarly varied is the colouring of copper and zinc alloys. Brass, for instance, with its 66.18% copper content, becomes golden yellow. A mixture of 31.52% copper and 68.48% zinc lets the alloy appear silvery-white.
[33] See sculpture by Johann Thaddaus Stammel (1760).
[34] Manfred Koller, "Fassung und Fassmaler an Barockaltären", in *Maltechnik-Restauro*, Vol. 88 (4). 1982.

CHAPTER TEN

NEOCLASSICISM: WHAT HAPPENED TO POLYCHROMY?

> The sculptor, being deprived of the seductive charms of colors, must use his most skillful means to attract attention[1]

The time-frame we are now entering largely draws a blank when it comes to colour in sculptures. Sculptors of the Neoclassical period rejected polychromy; monochrome were the surfaces of their works. The public had acquired a taste for white marble images and dark bronze casts, and why dwell on works and events dismissive of colour? There are however issues which are relevant to our subject.

Monochromy is, in historical terms, as much a phenomenon as polychromy is. It is an inside-out experience, a reading of the mould perhaps; a turning away from one kind of reality towards another, rare in our everyday existence. The significance of first Renaissance, then Neoclassical monochrome sculpture, is that it was intended that marble statues should be kept white and bronze statues or busts should become dark, even black, thereby avoiding any chromatic shades.

The tide had turned, but not without causing some waves and much froth, for a debate about colour in sculpture ensued during the eighteenth century, lasting right through the nineteenth century. In fact, during the mid-sixteenth through to the eighteenth century a parallel development of polychrome and monochrome sculptures had already taken place. Separated by content and regional preferences, Baroque church art and Neoclassical secular sculptures, each had followed its own path. And then polychromy was (at least for a while) abandoned altogether. As on a winter's day when white surfaces and black contours tend to set the tone, so in sculpture the contrasts due to light and shade, or black and white, set the scene. The untainted sculpted image was considered superior and in keeping with the classical tradition.

Taste became a major issue throughout the debate, having ignited the discourse begun by antiquarians and philosophers during the late eighteenth century. But now the subject acquired a moral overtone also as

it entered the politics of art and industry. In this respect colour in sculpture became an even more contentious topic and was as vigorously debated as was taste (the acquired ability to appreciate or attend to beauty). And how was one to acquire a sense of beauty? By imitating not nature, but classical art. This was the recommendation of one of the most influential proponents of the study of ancient art, the German scholar Johann Joachim Winckelmann (1717–68).

J.J. Winckelmann published two works which laid the groundwork for the new discipline of the history of art and which were also fundamental for art of what is now known as the Neoclassical period. He first wrote his small volume *On the Imitation of the Painting and Sculpture of the Greeks* (1755), and in 1764 his main work, *The History of Ancient Art*, was published. He wrote the latter book while living in Rome. His aesthetic sensibility and inclination towards classical art were nurtured by what he had read and had seen in copies of Greek statuary rather than by having travelled and studied at first hand the remaining monuments in Greece. He, like the Renaissance scholars and artists before him, was of the opinion that during the classical period the Greeks preferred their sculptures to be white. He knew and acknowledged that during the pre-classical period cult statues of all earlier cultures were coloured, but he came to the conclusion that as form advanced, so colour receded. Classical form must therefore have been untainted and white. Neither Winckelmann nor the Renaissance men of learning before him realised that what they were studying was by and large Roman copies of Greek statues which were indeed sometimes left uncoloured or, if once painted, had lost any trace of it.

However, during the mid-eighteenth century, when Winckelmann wrote his art history, form and colour had already been separated and realigned on different grounds and for different reasons. Michelangelo and Bernini had presented their sculptures, on the whole, monochrome and both had a strong preference for white Carrara marble. A deliberately naturalistic sculptural style also helped to break the old mould of relying on a polychrome finish. Grinling Gibbons's *Cosimo* panel (1680–82) may serve here as an example of how highly skilled chiselling contributed to a taste for monochromy. However, the English carver's approach was different from the Greek ideal that depended less on naturalistic detail and more on refining or abstracting the best from nature.

Still, before coming to Rome in 1755, Winckelmann must have seen German Baroque sculpture and been aware of certain colour shifts due to either the religious or the humanistic influence on art and also to the different appeal polychromy had within the Protestant churches and the

church of the Counter-Reformation. Brought up as a Protestant and later reluctantly converting to Catholicism for professional gains, he may never have felt easy with polychromy wherever he saw it, although we learn from his painter-friend Raphael Mengs (a collector of plaster casts), "Winckelmann once confessed that in sculpture there are two things missing which gives the art of sculpture the highest degree of beauty: light and dark and colour."[2] Nor can he have overlooked the prevailing trend in south Germany and Austria of emulating white marble, stone, porcelain and ivory by applying white poliment to wood or stucco.[3] Winckelmann was interested in Greek art and recommended the imitation of the Greek ideal, stressing above all the importance of form over colour. Indeed, his canon was categorical on this issue: "Colour should have but little share in our consideration of beauty. As white is the colour which reflects the greatest number of rays of light, a body will be the more beautiful the whiter it is." In another passage he is more specific in stating what he thinks the real issue is by giving one or two examples: "A black man can be called beautiful provided his features are beautiful; the disagreeable colour does not matter then. The same may be said about a green bust or a black statue provided it is of a noble form."[4]

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At first there was agreement between the theoreticians and the practitioners of art that sculpture had to be monochrome. In 1760 the French sculptor Etienne Falconet (1716–91) gave a series of lectures (translated into English in 1777). In his "Reflections on sculpture" he spoke out against colour, a viewpoint he shared with his friend, the art critic Diderot. Three years later he tried to demonstrate with his sculpted group *Pygmalion and the Statue* (1763) that there was no need to introduce colour in order to convince viewers that Galatea is coming alive. Several painters and sculptors before and after him part-painted her naked body to suggest a metamorphosis of stone into flesh. He, on the other hand, made her turn slightly towards her creator. He resolved the problem through movement, not colour.

Johann Gottfried Herder (1744–1803), a compatriot of Winckelmann, also reflected on sculpture (1772–78) when he wrote his essay *Plastik*. He claimed that the painted statue comes too close to nature.[5] With this he defended monochromy as the only legitimate finish for statuary. In 1771 Ephraim Lessing (1726–81), another German literary figure, referred to the *carae pictae* of the Romans and noted that the old custom of introducing coloured inlays into marble images was going a step too far

towards the limits of sculpture-making.[6] Some years earlier he took issue with the idea that "necessity was the act of clothing", asking "and what has art to do with necessity? But then, every art form has its counterpoints."

Peter Stärzer, one of many wax modellers employed in the making of votive figures in eighteenth-century Germany, would probably have disagreed with Lessing. He signed and dated *Ex Voto 1778*, a life-size wax image of the deceased Anna Bruggmayr of Kaufbeuren. Hair, (glass) eyes, the fabric of dress, were all genuine. The weight of the entire figure corresponded with the weight of the young woman portrayed.[7] The customary dressing up of cult or votive statues ran counter to the Neoclassical ideal of sculpture, for neither the Baroque figures, often finished in white poliment, nor the Neoclassical statues, which were usually entirely of white marble, encouraged dressing up. Votive figures seem to "necessitate" the clothing of their bodies and the colouring of their waxen portraits. Indeed, what has art to do with necessity? A votive image appeals to sensibility very differently: emotions, not abstract beauty, are being addressed when making a likeness of a known deceased person to quicken memory and longing. Any *realia* such as dress once worn by the departed seem to have this effect on emotion.

In Austria Emperor Joseph II introduced some reforming measures which applied to the excesses of interior decoration and certain sculptural images, like the votive figure just mentioned. The imperial decree of 1784 (*Decretum Caesareum*) was designed to curb the excesses of any showy or colourful display of statues in official buildings. A further ordinance (*Verordnung*) specifically mentions that dressed cult images had to be stripped of their gowns and ornaments (they had to be *entschmückt*).[8] These statues often wore real hair and had inlaid glass eyes. The *Decretum Caesareum* thus dealt in one swoop with perceived malpractices and helped to clear out all the accumulated junk. This did away, at least officially, with much "popular art" in order to make room for Neoclassical images that suited a different taste.

While monochromy was just about displacing polychromy in three-dimensional art, colour traces discovered on ancient Greek architecture and sculpture once again overturned an ideal and dismayed many scholars who were firmly wedded to the concept of the white classical form. Archaeologists and antiquarians, some mere adventurers, brought back to France the evidence that in ancient Greece even the monuments belonging to the fifth century BC, the classical period, had been polychromed. These findings were not accidental. As already noted in Chapter 3, one man in particular, Antoine-Chrysostome Quatremère de Quincy (1755–1849), was interested and committed to proving that the Greeks did colour their

buildings and sculptures in spite of, or because of, having used white marble. It was his publication of *Le Jupiter Olympien, ou l'art de la sculpture antique, considerée sous un nouveau point de vue* (1815) that introduced for the first time the subject of the iconography of Greek polychromy. It had taken him over three decades to research his material. However, not many scholars were convinced by his argument or won over to the idea of polychromy in classical Greek architecture and sculpture. Neither were the sculptors of his time persuaded that they now had to do likewise, namely colour their "imitations" of classical statuary. They saw no reason to follow this barbarism of spoiling the beauty of white marble. As far as they were concerned, there was no need to do so, for only the interplay of light and shade was relevant to form. And yet, few probably denied the fact that during all earlier periods of art colour was still needed at least to compensate for a lack in quality of either material or craftsmanship, or both. Indeed, even Winckelmann acknowledged that all cultures made use of colour during their earlier stages of development. Colour was in this respect equated with an inferior state of the arts. Strangely enough, he never considered the symbolic function of colour.

Quatremère had a more inquisitive mind; he questioned the assumption that the ancients were such puritans as Winckelmann had suggested. Italy, where the French scholar stayed twice at the beginning of his career, had just begun to open up an entire new vista for classical scholarship. There, archaeologists were digging up the ancient remains of Pompeii and Herculaneum and also the *campagna* around Rome. His first-hand experience of seeing traces of colour on buildings and sculptures convinced him of two things. Firstly, many ancient Greek statues known and admired since the Renaissance were, in fact, Roman copies. Secondly, the ancient Greeks employed colour most effectively at all times by various means and methods. It became his main task during the rest of his career to prove and advance the knowledge that the Greeks enjoyed polychromy and developed most sophisticated techniques in order to satisfy their ideal of beauty.

His lectures, and especially his impressive book with an equally impressive title, were based on archaeological finds but mostly on his reconstruction of the colossal image of the Greek god Jupiter by the fifth-century BC Greek sculptor Phidias. The abbreviated title *Le Jupiter Olympien* refers to the statue only; the remainder of it summarises for the reader what he, Quatremère, set out to do: firstly, to discuss the art of antique sculpture as it presents itself from a new point of view; secondly, to describe works we understand as a test of taste in polychrome sculpture; thirdly, to analyse and explain metalwork (*toreutique*), and also the history

of the chryselephantine statues which the Greeks and the Romans made; fourthly, with regard to the reinstatement of the principal monuments, to explain that art form; and finally to discuss the practical demonstration of the reintroduced mechanical processes that are involved. Thus, by concentrating on an exemplary work from antiquity the reader not only is presented with a new insight as regards aesthetics, or taste, prevalent during the fifth century BC, but also learns much about forgotten techniques. It was Quatremère's hope that contemporary sculptors would revive such ancient skills and apply them to their future works. With regard to aesthetics, every period has to be judged by the philosophy it holds and the taste it displays through its artefacts. To Quatremère it became clear that the Renaissance and later the Neoclassical taste were based on a misconception, or sheer ignorance about the ancients' way of thinking and doing things.[9]

The ancient technique of toreutics, which Quatremère described at some length, was essentially the combining of materials such as gold and ivory, the inlaying of coloured materials and the finishing of the surfaces in accordance with the desired effect, either by way of tooling or painting. This called for highly skilled workmanship in various crafts; indeed, the projected height of Phidias's *Jupiter* (drawn to scale by Quatremère) necessitated a large workshop and a capable work force. The figure of Jupiter was out of the ordinary in every respect. Seated on a throne that stood on a dais, the statue reached the ceiling of the cella within the temple where it was placed. The reader was able to see from Quatremère's coloured print of his reconstruction that the gigantic work dwarfed everything and everybody.

The sculptor had to piece together hammered sheets of gold and carved ivory sections over a core structure of wood. The clever combination of gold, ivory and various inlays produced striking colour contrasts and nuances. During Quatremère's research he spent time in workshops observing and learning from contemporary craftsmen the fundamental techniques involved when making chryselephantine figures, particularly on a gigantic scale. He hoped for a revival of these techniques.

The challenge of creating the first large chryselephantine statue was taken up by the French sculptor Charles Simart, who made a reconstruction of the *Athena Parthenon* (*c.* 1846–55). It was not a chryselephantine figure in the strictest sense; the ivory was combined with bronze rather than with gold. Quatremère was never to see this work, for he died in 1849. However, during his life-time the sculptor Antonio Canova (1757–1822) came under his influence and acknowledged through his own work the regained vision of colour in classical sculpture. He

added metal accessories to his marble figure *Hebe* (1817); he also painted its cheeks and lips, but the paint was later removed by its future owner, Lord Cawdor, who preferred a white statue.

Another sculptor, Bertel Thorvaldsen (1770–1848), who was familiar with the current debate, refrained from having his sculpture adapted to this new vogue. He was visited in his Italian studio by Jakob Ignaz Hittorf (1792–1867), an enthusiastic antiquarian and architect who in 1822, and again in 1823, had been to Sicily in search of evidence of colour on architectural and sculptural monuments. Thorvaldsen had at that time in his care figures from the temple of Egines on which Hittorf found traces of colour and gold (red, yellow and light blue). His host remained however indifferent to polychromy; neither his personal taste nor that of his clients could be shifted overnight. Yet the process of reconsidering a point of view had begun.

Meanwhile, nineteenth-century revivalists focused on yet another, less distant, period when polychromy was part and parcel of sculpture: the Middle Ages. In 1817 the life's work of the English scholar C.A. Stothard was published. In 1821 he died, aged 34, in an accident while exploring medieval monuments. The colour plates of his two-volume compendium introduce the student to *The Monumental Effigies of Great Britain*. Many of these still show their original colouring, notably the effigies of the royal tombs which he discovered at Fontevraud in France.[10] On the Continent a greater general awareness of the former splendour of Gothic art was largely due to restoration programmes – for instance the one at Bamberg Cathedral. A drive to respond to the past also came when, in England over a period of forty years, more than six hundred churches were built in compliance with the Church Building Act of 1818. Many of these were built in the Neo-Gothic style, yet their sculptural decorations often continued in the monochrome tradition of more recent times. Apart from producing religious images, the Gothic revivalists were interested in romantic subject matter to which the Gothic style was well suited. The combination of diverse materials contributed to the polychrome, if somewhat sombre, effect of those figures. Still, we need to return to the earlier phase of the rediscovery of polychromy.

The debate about polychromy began in France, where Quatremère had advanced a case for colour in sculpture in classical Greece. As already noted, his views did not convince everybody. Raoul Rochette, who in 1830 became his successor as director of the Louvre in Paris, rejected the idea of fully polychromed classical statuary, which was most unfortunate since in his influential position his opinion counted. But as much as the debate was about whether or not the ancients coloured their sculpture, it

was also about contemporary taste.

As the evidence about ancient polychromy was forthcoming it became possible to reassess classical sculpture and to establish its true nature. Yet taste depended on criteria such as, for instance, the current cultural climate and convictions held by influential individuals who nevertheless were open to manipulation, often for social or political ends. Academies, salons and world fairs were all used as levers to test and influence public opinion. Into these settings the newly created polychrome sculpture were received, eyed and judged.

Before entering into the evaluative process of nineteenth-century comments made by critics, one particular preoccupation of the time demands our attention: experimentation. During the Age of Reason, when science was on the rise, there was a greater willingness to try out and test one's assumptions, to be more analytical about the process involved and critical about the achievement attained. In the visual arts this outcome is to be expected, although it is often kept in check by patrons plumbing for the tried, and the trite. If, therefore, the sculptor experiments with a new idea, its test comes when what he creates is on show. We have already referred to one instance, the *Hebe* by Canova, coloured on advice by Quatremère but rejected by its purchaser. Works of art are first and foremost test cases for the sculptor, who sees his concepts projected and materialised and who during the process asks himself: will it work?

Reconstructions of the kind proposed by Quatrèmere (*Jupiter*) and realised by Charles Simart (*Athena Parthenos*) were in the first instance excused because of what they were: experiments or demonstration pieces for the student of antiquity. But most of the polychrome sculptures of the nineteenth century were created with a commitment towards the subject matter and its inherent possibilities. These, on the one hand, included a wider choice of materials, and on the other, new technological processes that had become available to the sculptor. There was also a gradual shift from idealism to realism, and colour in sculpture tested the viewer's tolerance when confronted with an object that resembled life perhaps too closely. Mimesis, an ancient concept, was taken up and tried out in a new context.

The French sculptor Charles-Henri-Joseph Cordier (1827–1905) produced in 1856–57 his *Algerian in Sudanese Dress*, one of a series of busts which he was commissioned to do for the Museum d'Histoire naturelle in Paris and which were intended for the new ethnographic gallery. Marble, Algerian onyx and bronze are the materials used for the *Sudanese*. The dark bronze head, the light-coloured head gear and the banded colouring of the dress complete the image of a native of the black

continent. Cordier maximised the expression by his careful choice and skilful combination of materials. The work is a thoroughly sculptural piece, and there are no painterly gimmicks. Even so the bust has an inner life because of its colour. The ethnographic character fully "justifies" the blend of the materials. The bust personifies a race rather than characterising an individual whose portrayal had been type-cast by its placement into an ethnographic gallery. The preface to the catalogue *Types des anciennes races* (prepared by the gallery) said that "it is true that art, in order to develop, has without ceasing to go back to nature, being the source of life".[11]

Cordier followed in the footsteps of sculptors who since Roman times had combined materials to emphasise the ethnic characteristics of a figure. In the Louvre there is the Roman copy of a Hellenistic original which is known as the *Dying Seneca*. Nicolas Cordier (1567–1612), a namesake of Charles-Henri-Joseph, also produced a negro in polychrome marble and coloured stone. Both the *Seneca* and the *Negro* have inlaid eyes, a feature missing in the *Sudanese*. The bust has Roman ancestry by virtue of its use of the Algerian "onyx", which was known in ancient Rome and was rediscovered in 1849 near Oued-Abdallah.

The significance of colour as used in these ethnographic busts and figures does not escape the viewer. The colour is demonstratively iconographical; the extended meaning of the subject matter is due to the busts having appropriate colours.

Colour may also be used to reinforce a sentimental idea. Matthew Cotes Wyatt (1777–1862) made use of various materials such as bronze, marble, other hard stones and gems when he composed his show-piece, the *Newfoundland Dog Bashaw*. Produced in 1831–34, the piece of sculpture was exhibited in the main avenue of the British section at the Great Exhibition of 1851. It was entered under the title *The Faithful Friend of Man Trampling under Foot his Most Insidious Enemy*. Both subject matter and execution (in colour) laboured a point. While the dog lover may feel tempted to pet the shaggy creature, looking ever so real, the moralist is perhaps abhorred to see noble feelings debased by this sentimental display. The art critic John Ruskin described it as "the most perfectly and roundly ill-done thing which as yet, in my whole life I ever saw produced in art". Colour has its own mechanism of triggering a reaction. Monochrome objects of sentimentality are at least self-contained in respect of colour and therefore allow the viewer to remain detached.

Whether by attraction or detachment, there is no doubt that John Gibson's *Tinted Venus* gained much attention. A polychromed marble statue, conceived and carved in the classical style, it was shown at the

International Exhibition of 1862. It stood on a pedestal within a brightly coloured alcove. The warm glow of the flesh and the tints of head and accessories must have sprung a surprise on any visitor used to seeing white marble statues. As for Gibson, he had experimented with polychromy before.

John Gibson (1790–1866) was an English sculptor of international repute. On returning to England from Italy in 1844 he received a royal commission to produce a statue of Queen Victoria for Buckingham Palace. In the winter of 1846 he decided to polychrome the work but he was in some doubt about whether his patrons, the queen and her consort, would accept the work in this form. He wrote and informed them of his intentions, and although unsure of their response he asked that the applied colouring be left on for at least twelve months, "in as much as Her Majesty would be able more justly to appreciate the real value of the effect of the colours by frequent examination of the work".

Gibson had trained in the studio of the Italian Antonio Canova, where he first familiarised himself with colour in sculpture. In Rome and later in Munich he met Italian and German artists who favoured polychromy. His visits to Munich introduced him to the bold manifestation of colour in architecture and sculpture as propagated by the architect Leo von Klenze and the sculptor Ludwig Michael Schwanthaler, and supported wholeheartedly by the Bavarian king. The climate for a revival of polychromy was also enhanced by the research of two young architects interested in antiquity, Gottfried Semper and Jakob Ignaz Hittorf, mentioned above. They proposed a stronger colour scheme for the figures and architecture than Gibson was prepared to apply. He preferred lighter tints to the even, flat pattern recommended by Hittorf. However, after his experiment and experience of seeing the statue of Queen Victoria painted, Gibson was convinced that "form without colour is like a body without soul".

White marble sculpture had become an anathema to Gibson, writes the art historian Elizabeth Darby, who studied his attitude to colour in sculpture:

> [he] clearly saw the revival of ancient sculptural polychromy not merely as an antiquarian pursuit, but also as a means of resolving what he considered to be a contemporary problem of harmonising white marble statuary with opulent, polychromatic Victorian interiors, a problem he had first encountered with his statue of Queen Victoria for Buckingham Palace.[12]

Still, it took him twenty years to make allowance for colouring in his own work, at first by only partially painting the statue of his queen – such as the border of the hem – before he was ready to apply colour to the entire

figure. The *Tinted Venus*, completed in Rome in 1854 and shown in London in 1862, two years before his death, is fully polychromed.

When in 1859 the sculptor Richard Westmacott (1799–1872) wrote that "owing to some experiments that have recently been made, it has been much canvassed whether or not statues should be coloured", he reflected on a situation which awaited resolution. In his opinion these experiments deflected from the real purpose of making and having sculpture. Westmacott did not like polychromy; therefore his referring to the *Tinted Venus* and other coloured works as "experiments" implied an overtone of severe criticism.

With any experiment a degree of uncertainty is involved; it is speculative until proved sound. But it also carries an expectancy of success. The term, as used in art during the nineteenth century, covers two different things: firstly, genuine experimenting with technological processes, as for instance with new types of patina, new materials or the revival of forgotten techniques; and, secondly, testing the reception of anything different or novel – that is, the climate into which novelties are received.

During the Renaissance the artist was encouraged to be "innovative". Luca della Robbia innovated a new process of applying coloured glazes. Of course, this involved much trial and error as he experimented. The polychrome busts and statues produced during the nineteenth century are seen and judged by contemporaries as experiments, not as innovations, thus emphasising the chance element of succeeding. When Georg Treu, the German archaeologist and director of the Dresden Albertina, gave his lecture "*Sollen wir unsere Statuen bemalen"* (1885) he frequently used the term "experiment" while referring to works by Simart, Gibson and Siemering, who produced reliefs in majolica, and to Carl Cauer, who introduced a novel way of achieving special effects when applying colour over a gold ground.

Georg Treu used quasi-scientific language not dissimilar to that of Michael Faraday, the English chemist, who in 1830 examined the Elgin Marbles for possible colour traces. Treu, and also Cauer, emphasised the "experimental character" of some works of art. Thus we read of Cauer's *Erstlingsversuche* (first trials) and of his own assessment of these.[13] There was an awareness among the sculptors that they were trying out something new, something of which they had no previous experience. Their training and qualifications were limited to conceiving and making monochrome sculpture. They did not expect or get help from suitably qualified painters for the finishing of their works. With the polychroming having become a redundant profession during the Renaissance (except during the Baroque period in Germany and in Spain), any special skills formerly practised

were before long forgotten. Colouring techniques had now become a matter of trial and error.

A unique insight into how polychromy was perceived and understood is gained by studying the late work of Jean-Leon Gérôme (1824–1904). He was a painter who turned to sculpting during the latter part of his career. He was much preoccupied with visually and actually reconstructing Tanagra figurines. (These were ancient painted terracottas which had come onto the antique market in the 1870s.) Gérôme was fascinated by them and thoroughly entered into the subject by doing several things: he painted historic workshops, and also a series of paintings portraying himself as the sculptor or polychromer of such Tanagra models – closely based on actual figurines or larger statues. Then, as sculptor, he replicated the models as shown in his paintings. They, too, were polychromed but have lost much of their original colouring. Gérôme was a true innovator but also an indefatigable experimenter. He demonstrated the closest possible ties between painting and sculpture as they stand in for one another. The interrelationship of the two sister arts as shown in Gérôme's work subtly acknowledges their relationship to one another.

Elsewhere, such hitherto close ties were loosened. Art and design also became two distinct branches, and this had wider implications. In England and Wales design schools were set up between 1837 and 1852. This was seen as an experiment to help improve taste and design skills and was to further the interests of manufacturers who experienced strong competition from abroad. International trade exhibitions had shown that the products of foreign competitors were generally of better design. As for art education, fine art and applied art had become separated. The academies and the design schools each looked after their own interests, and thereby sometimes failed their clientele, the students. The academies in England and on the Continent mounted public exhibitions; these often offered the only opportunity for the artist to make his work more widely known. In France the salons had already taken on that role when from 1737 onwards they became an annual event in opposition to L'Academie des Beaux-Arts. However, the regulations for entry were strict and sometimes pedantically applied.

In London the Royal Academy Exhibition of 1845 included the sculpted figure *A Dancing Girl* by Joseph Gott (1786–1860). Of this piece of work *The Literary Gazette* wrote on 3 July 1847 that (other) parts of the statue had been painted and that these had been white-washed by the Academy because "coloured marbles were contrary to regulations".[14] The Academy was equally adamant about excluding works made of coloured wax. The French however were more tolerant as regards colour in

sculpture; the Salon of 1863 showed Cordier's ethnological busts – they were, after all, a public commission intended for permanent display in the Ethnological Gallery and hence officially approved. No doubt a sympathetic appraisal by a leading art critic helped the artist's cause, as in the instance of Jean-Baptiste (Auguste) Clesinger (1814–83), who showed at the Paris Salon of 1847 his *Woman Bitten by a Snake*. The Parisian art critic Theophile Burger Thore wrote most appreciatively about Clesinger's work and the sculptor continued to polychrome his statues of exotic historical females, *Sappho* and *Cleopatra*, which he had shown at different salons.

The French painter and sculptor Edgar Degas (1834–1917) also tried to break the mould of tradition and conventionality when he submitted his wax figure *Little Dancer of 14 Years* (1880–81) to L'Exposition des Indépendents in 1882. It was received with a mixed reaction from the public who had not seen the like: a coloured wax image of a plain-looking girl dressed up and posing as a dancer. The materials of the tutu, bodice, ribbon and shoes were real, and so was the hair. At a later stage several editions were cast in bronze and painted, but each time textiles for the tutu and hairband were added, preserving the original feel of "reality". Degas, who closely studied young dancers while practising, made many drawings and paintings of this subject, which he popularised. The polychrome figure is, it seems, the natural conclusion to what he had studied and absorbed. She had become a Coppelia who had stepped out of the canvas ready to move. Almost a decade later Gérôme sculpted his *La Danseuse à la pomme* (1890), of which several polychrome bronze casts (among them reductions) were also made.[15] A new trend had developed to produce editions of an original work of art and international exhibitions were of great importance to sculpture in this respect.

The Great Exhibition of 1851 permitted sculpture to be included. The novelist William Makepeace Thackeray was a contributor to *Punch*, writing under the alias of Malloy. He invited his readers to focus on the material aspect of sculpture, but he also hinted (with tongue in cheek) at the moral dilemma created by the choice of sculptors' subject matter and their treatment. He observed:

> The sculpture at the Exhibition was popular too, not least on account of its technical skill applied to narration of the most infantile sort. It was thereby the tone, decadent off-spring of Thorvaldsen and Canova, and much of it was either sentimental or surreptitiously carnal. A group of admirers was always to be seen gazing at Hiram Power's *Greek Slave* beneath its red velvet canopy in the centre of the American section.

And the catalogue explains the story with care:

> The figure embodies an historical fact, and the figure is intended for that of a young and beautiful Greek girl, deprived of her clothing, and exposed for sale to some wealthy eastern barbarian, before whom she is supposed to stand, with an expression of scornful rejection mingled with shame and disgust. The chains on her wrists are not historical, but have been added as necessary accessories! Why the chains should be necessary for the restraint of so cool a character is not revealed.

Malloy (Thackeray) wrote down his impression of the sculptures at the Crystal Palace rather more summarily by composing a poem of which one verse in particular vilifies the current scene in art: "There's statues bright / Of marble white / Of silver and of copper. / And some of zinc, / And some, I think / That isn't over proper."[16]

The Greek Court at the Crystal Palace was designed by the interior decorator Owen Jones. In 1854 he wrote *An Apology for the Colouring of the Greek Court*, a raison être for having decorated it in the fashion of the ancient Greeks. He explained as follows:

> at a very early stage in the arrangement for forming in the Crystal Palace a series of reproductions of architectural monuments, I felt that to colour a Greek monument would be one of the most interesting problems I could undertake; not indeed in the hope that I might be able completely to solve it, but that I might, at least, by experiment remove the prejudice of many.

Some pages later he refers to the materials used by the Greeks for their statues:

> could we forget the varieties of materials which they combined harmoniously, in the statues of their gods – the varieties of colour which they gave to a material, by us considered to be of so uniform as bronze, in which to heighten the expression they wished to obtain; (by alloys of iron, silver, and gold), used on the various portions of a figure, the greatest known sculptors produced the paleness of death, – the blush of shame, – the smile on the mouth, – the fire of the eyes, and the healthy redness of the cheek; the ornaments of metal with which many of the marble statues were covered – earrings, bracelets, armlets, sandals, bands round their hair, crowns, diadems of pearls, precious stones, eyes of silver, glass and precious stones. ... How can one believe that at one particular period in the practice of the Arts, the artistic eye was entirely changed that it became suddenly enamoured of white marble? Such an idea belongs only to an age like that through which we have just passed – an age equally devoid of the capacity to appreciate, and of the power to execute, works of art – when refuge is taken in white-washing.

For the first time during an international trade fair the past met up with the present. History was on show; ancient and modern styles were being compared. But it was a modern event nevertheless, and visitors learnt of new developments, designs and techniques that were of value to various industries and, in some respects, also to art and design. Some new applications, industrially tested, also became accessible to sculptors and changed not only the marketable value but also people's perception of what sculpture is about: a tradeable commodity, not least because of its colouring.

The illustrated trade catalogues of the foundry firm Susse of Paris, which were published between 1839 and 1914, offer an insight into the small-scale statuary produced in France during the nineteenth century. It lists 182 artists and 1487 pieces of sculpture, all covering different styles that currently reflected the public's taste: classicism, romanticism, orientalism and realism. They also are informative about subject matter and, in particular, about one major innovation, the portrait-statuette.

With the invention of the pantograph it had become possible to reproduce mechanically, and also to reduce, sculptures to small-scale models. This opened up other possibilities; the founder could now cast to specification. The metal alloy could be varied to effect the colouring wanted; also, multiple casts encouraged experiments with different patina or surface colouring. This type of small-scale sculpture found a ready market among the rising middle classes who perhaps already collected Meissen or Minton porcelain, or acquired genuine (or less genuine) Tanagra figurines.

The different colours of metal and of patina have inspired sculptors in ancient and again in modern times as new processes were discovered with which to create many novel effects. Metal casts of the Renaissance period were, on the whole, of uniform colouring, although parcel gilt was sometimes added to create a colour contrast. But during the subsequent period, silver or copper overlays were also favoured, occasionally in combination for a richer colour effect. The use of diverse metals on one statue was to be seen not only on bronze casts but also on some wood carvings, which were made to look like bronze or silver castings.

The painting of carvings in imitation of metal casts had however been an acceptable practice during earlier times as civic and festive occasions required the display of illusionistic decorations. Renaissance pageantry incorporated temporary designs which were visually pretentious yet affordable.

The appreciation of materials for their own sake or simply for appearance's sake is an art-historical problem, and at times a vexing one,

for we can only go by what we see, and judge by how a society at any given time perceives anything that is of material value or how it relates to things of temporary or permanent duration. The need to imitate or to create illusionary effects has often a deeper social significance. To take the illusionist designs inside many Baroque churches, they were to help people visualise, presenting to them a heavenly glory. In profane art, where mythological or worldly concepts were pursued, it was often by imitating the wealth of a grander court and of richer princes that a comparable social status was achieved or maintained. Similar aspirations impelled the new middle classes of the nineteenth-century industrial societies. They used the means available to them; these were new materials and industrial processes to which we have already alluded.

Any notable shift from one thing to another, such as from imitating casts rather than making casts, should alert us to possible corollaries. In eighteenth-century Germany there was a decline in bronze casting, a complicated process for which knowledge and experience are handed down over generations. A new industrial casting method was developed and monuments in bronze were again on the increase. At first these new casts may have looked bright and polished, but they soon changed their appearance if they were part of an industrial environment where heavy chemical pollution was prevalent. They blackened. The weather, too, worked on the surface of outdoor monuments and added a blend of colours, mostly green, similar to the time-worn sculpture of antiquity. New means and methods of achieving artificial patination had also made it possible to satisfy the taste of the time. Many bronze casts intended for interiors were given a black, or very dark patina, although statuettes were also frequently gilded. The ancient look was much liked; hence the process of corrosion was speeded up by applying acids that produced verdigris and changed the colour and texture of a cast. A German manufacturer actually produced a "bronzing soap" that was to assist the sculptor in effecting an antiquated look on his new piece of work. And it was not just metal casts that were treated in imitation of this or that look; graphite powder was found to be suitable for blackening terracotta figures.

To stay with metal sculpture, let us take a closer look at examples that were the outcome of a new collaboration between the artist-designer and the industrialist, each depending on the other for achieving their goal of creating eye-catching images on the one hand and a profitable market on the other.

The French sculptor Antoine-Louis Barye (1795–1875) modelled in 1831 his group *Tiger Devouring a Gavial* (crocodile), of which several bronze editions were made during his life-time. A recent catalogue entry suggests that the 1874 edition was probably a sand casting and not done by

the lost-wax cast method. Sand casting requires meticulous chasing afterwards, usually leaving a texturised surface. The patination of this group may have been done after the sculptor's death. However, Barye was a master of patination, and he knew how to change surfaces with great skill and with the help of chemicals. He created subtle differentiations in shading from the classic brown-black of the Renaissance to a modern green, a colour which has come to be considered typical of French bronzes. One of his groups shows the tiger all in brown, the reptile in green.

The decision to colour and the choice of shades used is inevitably influenced by the subject matter. When Emile Hébert (1828–93) had his bust of *Semiramis* (*c.* 1878) colour treated, he sought to express with it the character of this legendary Assyrian queen. He used patinas "to heighten the exoticism of the subject", which he achieved by patinating the bust with three different colours. "The green patina of the flesh underscores the *morbidezza* of the subject while the brown helmet and old gold orphrey underline its preciousness."[17] The work was given a black marble base.

Alfred Gilbert (1854–1934), a British sculptor who worked for many years on the Continent, closely studied the subtler ways of colour affecting sculpture. In 1883 he modelled the head of a girl of which a bronze cast was made, probably in lost-wax casting. It has the colour of graphite, and traces of gilding are still visible in the hair. The importance of this bust is its modelling and its feel for surface texture, subtly letting light and shade suggest tonal values. In 1888 Gilbert published a paper in *The Universal Review* with the title "*Couleur* in sculpture", wherein he explained the meaning and usage of the term *couleur* as applied to sculpture.[18]

He observed that a work of sculpture is spoken of as either being full or devoid of colour; however few question what the term entails. Regarding what is really meant by the word *couleur* in sculpture, he writes, there is as great a difficulty in explaining it as there possibly is to some in understanding that it should exist as a quality at all; for "it is something to be felt rather than described". He concedes that the quickest way to get at a clear and simple definition of the word *couleur*, as applied to sculpture, is to enquire into what sculpture really is. Referring to bronze sculpture, he thought that whatever its form, it really depends on modelling, which is the most practical and direct means of expression. Gilbert then enters into what may be achieved that way and also compares the texture and surface with that of painting, which leads him to say:

> in sculpture all these qualities have to be suggested in one material and without the use of pigment, while in painting they must be expressed without the use of actual relief. So it comes to this, that in speaking of

> "couleur" in a work of sculpture, we are merely expressing our sense of the presence of that just proportion of relief and due relation of one part to another, which together bring about a harmony of light and shade, and gradation, and convey to us the suggestion of reality through the means of convention ...

Gilbert was preoccupied with colour in sculpture; even with his near monochrome bust he thought in terms of what constituted colour in sculpture rather than what it takes to diminish or exclude colour. Thus he introduced paint and other colour qualities into his work for the sake of extending the iconographical content of his subject. For the Fawcett Memorial (1885–87) he first explored the use of polychromy by using diverse materials. Zinc and aluminium had now been effectively added to the list of sculptural materials. For the tomb of the duke of Clarence at Windsor Castle (who died aged 28 in 1892) Gilbert also made a silvery aluminium angel holding the duke's crown. Into the bronze grillwork he had incorporated twelve statuettes, two of these representing the Virgin and St Elizabeth. To these bronzes he applied paint but the faces and hands of all the figures, including those of the duke, were carved in ivory.[19]

Richard Dormant, in his monograph on Alfred Gilbert (1986), highlights the sculptor's preoccupation with polychromy, noting that Gilbert applied external polychromy to his Fawcett Memorial but that in the 1890s, under the influence of the metallurgist Sir William Chandler Roberts-Austen, he began to experiment by substituting gold and silver for tin or zinc in his alloys in order to create dramatic purplish or silvery patinations.

The practical and experimental side of polychromy produced results and answers of one kind, but some of the questions raised at the beginning of the debate had extended into a prolonged rhetoric. During the latter part of the nineteenth century the debate about polychromy was more vigorously pursued, for by then colour in sculpture had become an issue not only with antiquarians but also with practising artists, industrialists, curators and, not least, the public. Also, major museums rapidly increased their holdings as they began to acquire antique sculpture – genuine pieces as well as reconstructions. In Dresden the Albertina was built to house ever more Greek plaster casts; some were painted as part of a trial to reconstruct Greek polychromy. In 1883 the archaeologist Georg Treu became museum director and it was during his directorship that polychromy received the fullest attention and public exposure. Treu's general enquiry included ancient as well as modern sculpture. He tried to elicit some answers to why colour either enriches or deprives sculptures when present or absent. Two kinds of questions that were generally asked were, firstly, concerned with strictly historical problems, while others

related to the function and purpose of polychromy, problems that have relevance right through the history of sculpture and therefore will remain part of an ongoing debate.

Fig. 10–1 Room with plaster-casts of Greek figures. Source of photo: unknown.

Despite the archaeological evidence that came to light, the question of whether the Greeks painted their sculptures had not yet been satisfactorily resolved. While on the whole it was accepted that the ancients coloured their sculpture, degree and manner now became an issue. Were the statues fully or only partially coloured? How were the pigments applied: opaque, flat, mixed or translucent? During the middle of the twentieth century scholars were still looking for convincing explanations. One way of keeping the debate alive was, of course, by publishing articles and by lecturing on the subject. The questions raised by the sculptor Richard Westmacott in 1859 and by the archaeologist and museum director Georg Treu in 1883 will give us some insight into their way of thinking and the challenges presented to the wider public at two important moments during the debate.

When Westmacott asked whether it was desirable to return to this practice (meaning to the painting of sculpture), he in principle agreed that polychromy used to be part of making images. He did not think, however, that in classical Greece this practice was continued; rather (and in

agreement with Winckelmann) that polychromy was contradicting the highest aim of art by mixing together two arts (painting and sculpture) though the principles essential to each require that they should be kept distinct. He wanted to know what the objectives were when painting or colouring sculpture. He then asked more specifically:

> Firstly, is it to render the imitation more close to nature? Secondly, is it to attract attention? Thirdly, is it to gratify the senses by adventitious decoration? And fourthly, is it to give distinctness to the parts of a work when viewed from a distance? These, by themselves, are all very good questions.

The first of the four questions deserves a closer look. Westmacott raised two strong objections, realism and taste in art, and also touched on a corollary issue, ethics in art. About the first he said:

> Even such a near approximation to reality as is afforded by wax-work exhibitions, is anything but pleasing to the generality of people, and especially persons of taste in art, though they may be amused by the talent and ingenuity shown in thus producing resemblances. It is not intended to insult legitimate sculpture by a comparison with bad common-place wax-work figures, but, in all fairness, to take the best that could be produced. Even if they could be the productions of first-rate artists the argument would equally apply. The dissatisfaction felt in this case, is to be accounted for on a perfectly intelligible principle. The reason for it is, that wax-work approaches too near to nature to be agreeable to art, and yet it is not near enough, or true enough to nature – nor can it ever be so – to make us forget it is art …

The second objection he raised in his lecture he expressed as follows:

> It is surely not too much to say that a male statue, such for instance as the Farnese Hercules, or the Barbirini Faun or even the Belvedere Apollo, if presented to public exhibition in flesh tints, with the hair painted, and the eyes coloured, however delicately and carefully this might be done, would not for a moment be tolerated. Would any father willingly take the females of his family into a gallery so peopled? It may be said, this is putting an extreme case; but the objection is a sound one, and it is not easy to define where the line is to be drawn. The feeling of prejudice which some persons entertain with respect to exhibitions of so called "classical" sculpture, and which it is impossible to blame where nude displays are made apparently only for the sake of exhibiting the naked human figure, would have ten-fold force under such circumstances. This in itself constitutes a very strong argument against these meretricious appliances to a pure and, otherwise, simple art; and putting aside, for a moment, the art-question, it is difficult to conceive how the modern Polychromist, if he be a true, conscientious

artist, can escape from the dilemma …

Westmacott diplomatically avoided contemporary examples. The public was well aware of Madame Tussaud's wax figures and other sculptures modelled in wax, coloured and dressed. Indeed, wax works gained in popularity across Europe; however they evoked distaste in some people, who regarded these objects with horror. As for painted marble statues, he could have mentioned Canova's or Gibson's polychrome figures.[20]

In Dresden almost twenty years later, Georg Treu was in the throes of preparing a lecture and an exhibition entirely devoted to polychromy. Concurrent with this work he projected his idea of showing a polychrome model of the Zeus temple of Olympia and painted casts of the figures taken from the east pediment of that temple. These reconstructions were to be shown at the jubilee exhibition of the Berlin academy in 1886. Before becoming a museum director Treu had been excavating at Olympia. He now took the opportunity to demonstrate what colour effectively does to sculpture. It had become the museum's policy to acquire polychrome sculpture, antique and modern. For the exhibition (in Dresden, 1883; Berlin, 1884) he invited contemporary sculptors to submit their coloured sculptures to round off the historical display on the theme of polychromy. In his introduction to the Berlin catalogue he wrote that the exhibition served two purposes: on the one side, it was intended to show examples of polychrome sculptures from different countries and times, some original, some as part of an attempt to reconstruct and demonstrate their former appearance. Thus the visitor would gain an overview of the widespread custom throughout history and the many techniques applied in achieving coloured sculpture. On the other side, the exhibition presented an opportunity to those artists who were attempting to revive a long-forgotten practice and to mount their works in an environment congenial for their evaluation.

In his public lecture[21] Georg Treu addressed the question "Should we paint our statues?" (Sollen wir unsere Statuen bemalen?) The argument runs as follows. We now know that the ancients coloured their sculpture. We also acknowledge that the Neoclassical "appreciation" of white classical sculpture was based on a misconception. We accept that colour can play, and has played, a big part in sculpture. Is that a sufficient reason for reintroducing colour into sculpture when, as we have seen, sculpture does not depend on colour? Monochrome sculpture has its attraction, as demonstrated by Renaissance and Neoclassical sculpture.[22]

What evidence did Treu have with which to convince his audience that in antiquity there was indeed colour in sculpture? He was able to give an

account of his first-hand experience as an excavator. There was also internal evidence, to which he referred, for in pre-Pompeiian mural paintings the representations of statues are never white; they all appear polychrome. Indeed, in no extant ancient paintings are there white sculptures to be seen. He observed that the modern world with its taste was insufficiently prepared for coloured sculpture. He wondered, in the light of what has been discovered, what still separated the two factions of the debate. While he conceded that flesh colour or *circumlitio* was still a bone of contention, he insisted that there is proof that marble statues, even of the classical period, were completely painted. He found it incomprehensible that any imitator of classical Greek portraits should have accepted their empty eye sockets without questioning the reason why the ancient sculptor prepared these cavities.[23]

Georg Treu then entered into the question of colour in contemporary sculpture. As previously discussed, he was greatly aware of the experimental nature of modern polychromy. He was in touch with practising artists and encouraged them in their endeavour, as did Quatremère at the beginning of the great debate. More than at any other period, the sculptor had to find out and test, for there were new materials, new techniques and new artistic concepts that needed to be tried out. Glass pastes, wax, ceramics, metallurgy, methods of casting and patination – to the creative mind all these had potential. There was one material however that attracted a young painter-sculptor in particular, not because it was entirely novel but because it had a new appeal: coloured stone.

The use of varied marble for his portraits and figures was an idea that Max Klinger (1857–1920) derived from ancient Roman statuary. As we may recall, Klinger was not the first in modern times to make polylithic statues. Charles-Henri-Joseph Cordier had successfully employed coloured stones for the sake of expressing realism, and so had Pierre II Legros.[24] Klinger however wanted to convey symbolic meaning. But in both cases their polylithic statuary is also a statement about truth to material, a claim associated in the past with the white marble figure.

An acquaintance of Georg Treu, Hermann Prell, wrote to him from Rome on 28 December 1892 with some excitement:

> I wonder what you will say to Klinger's new coloured marble [bust], this one is truly polychrome, not just tinted; the amber eyes are lively in an uncanny way – the whole is so absolutely opposite to nature, that it does not allow any comparison. Its style is peculiarly its own.[25]

Klinger's *New Salome* half figure referred to by Prell was composed of seven different types of stone. Its head, front and hands were carved in

Pentelic marble, the dress in hymettic marble. For the head of a youth he used Carrara marble which he tinted blue, whereas for the carving of the head of an old man he chose African marble. The eyes of *Salome* and those of the *Youth* were amber. The socle was made of black Belgian marble and the plinth of Pyrenean marble. Klinger had first prepared a plaster model which he had painted (1887/8). He later compared the effect of the painted with the polylithic *New Salome* and commented, "For the composition the colour [of the plaster model] is not livelier – but more energetic."

When Klinger's major work, the *Beethoven* group, was being reviewed by the critic Heinrich Bulle, the latter noted that the composition of all the materials may be decided upon with the greatest care and thought, and with much mastery of selection – but as soon as the choice is made, then the artist is a slave to his material. Klinger was well aware of the difficulties with which he was beset when "translating" his original concept of a Beethoven monument (first realised in plaster and painted) into stone, or stones. The paint always allowed him more control over the colouring, whereas a pastiche of coloured materials was from the outset a compromise. Bulle thought the colour scheme of Klinger's final work stunning yet crass, without any transition, without any harmony, for everything was separate. The most agreeable and attractive aspect was the warm yellow and brown of the cloak, an isle within a surge of colour, to which one's gaze prefers to return again and again. But the eye catches the jumpy reflection of the gold on the arms of the chair, and the loud red and blue of its back flashes past the vision like a burning colour band. Thus we are torn from side to side by the colours, up and down, without a clear direction or any rhythmic increase. And where do we find the main object, the head? Bull exclaims that one almost has to search for it. The white of the chest is dull; the marble, although slightly yellow, tends to look greyish in contrast to the surrounding colours.[26] Klinger's *Beethoven* group was conceived in 1885 but its polylithic version was only finished in 1905; thus this project spanned several works he created in the meantime, for example his *New Salome*, *Cassandra* and *Elsa Asenijeff*.

Perhaps the most consequential experimenter among the nineteenth-century artists was Jean-Leon Gérôme. He took up the theme of polychromy as a painter and as a sculptor. He recreated historical subject matter – for instance, the Tanagra figurines already mentioned, in the sculptor's and the painter's medium. He identified himself with the polychromer but also empathised with the sculptor when he imaginatively entered into the myth of Pygmalion. His rendering of a fierce *Bellona* demonstrated the confidence he had in combining sculpture and colour for

the sake of maximising the subject matter's impact. He demystified the creative genius and showed himself as an originator but also as a thinking, hard-working craftsman who knew all the tricks of his trade but was not subjected to any dehumanising industrial process. His was a last look at a past which no cultural revival or form of historicism is able to bring back.

Notes

[1] Étienne-Maurice Falconet, "Sculpture", *The Encyclopedia of Diderot and d'Alembert Collaborative Translation Project*, transl. Nelly S. Hoyt and Thomas Cassirer (Ann Arbor MI: MPublishing, University of Michigan Library 2003). Web 26 February 2013, http://hdl.handle.net/2027/spo.did2222.0000.166, trans. of "Sculpture", *Encyclopédie ou Dictionnaire raisonné des sciences, des arts et des métiers* (Paris 1765), Vol. 14.

[2] "Winckelmann gestand einmal zu, dass der Bildhauerei zwei Dinge fehlten, die der Kunst die höchste Schönheit verliehen: Das Hell-Dunkel und die Farbe", Ulrich Christoffel, *Der schriftliche Nachlass des Anton Raphael Mengs* (Trapeza: B. Schwabe 1918).

[3] Hanna Philipp, "Winckelmann und das Weiss des Rokoko", in *Antike Kunst* (1996), Vol. 39, no. 2.

[4] "Ein Mohr konnte schön heissen, wenn seine Gesichtsbildung schön ist, und ein Reisender versichert, dass der tägliche Umgang mit Mohren das widrige der Farbe benimmt und was schön an ihnen ist, offenbart; so wie die Farbe des Metalls und des schwarzen oder grünlichen Basalts der Schönheit alter Köpfe nicht nach-teilig ist. Der schöne weibliche Kopf in letzten Art Stein in der Villa Albani wurde in weissem Marmor nicht schöner erscheinen; der Kopf des älteren Scipio im Palaste Rospigliosi in einem dunkleren Basalte ist schöner als drei andere Köpfe desselben in Marmor. Diesen Beifall werden besagte Köpfe nebst andern Statuen in schwarzem Steine auch bei Ungelehrten erlangen, welche dieselben als Statuen ansehen. Es offenbart sich also in uns eine Kenntnis des Schönen auch in einer ungewöhnlichen Einkleidung desselben und in einer der Naturunangenehmen Farbe: es ist also die Schönheit verschieden von der Gefälligkeit." (A Moor could be said to be beautiful, if his facial structure is beautiful, and if a traveller assures us that the daily traffic with the Moors lets us overlook what is abject in their colour and reveals what is beautiful in them – such as the colour of metals, and the black or green basalts which are not seen as a disadvantage in old busts. The beautiful female head in the latest fashionable stone in the Villa Albani will not be more beautiful than had it be made of white marble. The bust of the older Scipio in the Palais Rospigliosi, which is in dark basalt, is more beautiful than three other heads of the same [Scipio] in marble. Those heads mentioned, beside other statues of black stone, will find applause even among the uneducated [people] when seeing these statues. Therefore what this reveals is that we have knowledge [an idea] of what is beautiful even if dressed up in unusual ways and in a colour which

is naturally unpleasant; thus, beauty is something other than being agreeable. Transl. H.H.)

[5] Johann Gottfried Herder, *Plastik* (Köln: Hegner 1969), p. 51; "Die oben gesetzte und oft aufgeworfene Frage, warum wird die Bildsäule und ähnliche Anwürfe nicht schön, sondern hässlich da doch in der Malerei Farbe so grosse Wirkung hat?" Antwort "Weil die Farbe nicht Form ist, weil sie also dem merkbar wird oder merkbar sogleich die schöne Form hindert. Sie ist Sandkorn, Täusche, fremder Anwuchs, worauf wir stossen, und der uns vom reinen Gefühl dessen, was die Natur sein sollte, wegsucht." Further on (page 62) Herder adds: "Die obengesetzte und oft aufgeworfene Frage ist bisher meistens anders beantwortet worden: durch Farbe werde die Ähnlichkeit zu ähnlich, gar identitisch mit der Natur, das sie nicht sein soll. Man könne die bemalte Statue in der Entfaltung gar für einen lebendigen Menschen halten, darauf zugehen, u. dgl. Wer von diesen Ursachen etwas versteht oder sich mit ihnen befriedigen kann, dem beneide ich seine Zufriedenheit nicht". (The question posed above and often raised is: why are statues and similar designs not beautiful but ugly, even in painting, where colour is most effective? The answer is: because colour is not form, yet it is notably present, and so it interferes with the beautiful form. [Colour] is [like] sand, deflection, foreign matter, an outgrowth, and it distracts us from experiencing a pure sense of what nature really is … The question posed and raised above has hitherto often been answered quite differently: due to colour similitude [it] becomes even more similar to, almost identical with, nature, which should not be. The painted statue can in its unfolding be almost mistaken for a real person, whom we can meet, talk to, etc. I do not envy anyone who comprehends the causes, or is satisfied with them, for their being so content. Transl. H.H.)

[6] Gotthold Ephraim Lessing (1766), *Laocoon oder Über die Grenzen der Malerei und Poesie.*

[7] cf. Angela Hueckel and Irmgard Schnell, "Die Untersuchungen der Wachs-votivfigur der Anna Bruggmayr im Kreszentia-Kloster in Kaufbeuren", in *Zeitschrift Kunsttechnologie & Konservierung*, Vol. 1, no. 1 (1987).

[8] See *Handbuch aller unter der Regierung des Kaisers Joseph des II. für die K.K. Erbländer ergangenen Verordnungen und Gesetze*; 6 (Vienna 1786), p. 601. "Was die Statuen, und die Kleidung der Bilder betrifft, hat eine jede Statue nur allein aus der Materie, aus der sie verfasst ist, zu bestehen, und muss folglich auch ihre Kleidung ebenso aus Stein, Holz, Gold oder Silber sein, ohne dass sie mit einer anderen Materie bedeckt oder bekleidet wurde. Und dieses ist ebenfalls in Rücksicht auf die Bilder zu verstehen." (Concerning the statues and the clothes of images, each statue must be made of just one material, therefore the clothes must also be of stone, wood, gold or silver – that is, they must not be dressed up or covered in other materials. And this [rule] also applies to paintings. Transl. H.H.)

[9] There was of course another reason for monochromy becoming the preferred option. It suited the Protestant ideal, which was clearly hostile towards too much colour.

[10] The Royal Abbey of Fontevraud became the resting place for Henry II, King of England, Count of Anjou and his queen Eleanor of Aquitaine; and Richard I, King of England, Duke of Aquitaine, Count of Poitou.

[11] See catalogue: *L'Oeuvre de M. Cordier: Galery Anthropolique et Ethnographique* (1860).

[12] Elisabeth S. Darby, *Art History*, 1981, Vol. 1. The original colouring has since faded; only slight traces of yellow and red are still visible, while blue has entirely disappeared.

[13] Treu was saying: "pflegte doch der Künstler selbst stets wieder hervorzuheben, dass seine 'Versuche' [*sic*] eben als solche gelten wollten und einstweilen noch nicht den Anspruch erhöben, nach allen Seiten gelungenes zugeben." Treu continued: "Cauer gebührte zunächst neben Siemering nicht nur das grosse Verdienst, durch energische Initiative auf einem bisher fast verfehmten Gebiet wieder einmal den Bann gebrochen zu haben, sondern auch das Besondere eines 'lehrreichen technischen Versuches.' Zeigen seine 'Proben' doch, trotz aller Mangel, wie man der farbigen Gesamthaltung einen Character wahren kann, welcher auch uns, die wir bemalte Statuen nicht gewöhnt sind, als eine angemessene und stilvolle Steigerung der idealen Form anmutet. Und damit ist viel gewonnen. Das Gold, auch wo es vollständig mit Farbe gedeckt ist [Cauer], schimmert als Untergrund durch, namentlich wenn es von hellem Sonnenlichte getroffen wird, und trennt den auf diese Weise höher gestimmten Farbenton von 'vulgären Naturnachahmung.'" (it is the artist himself who repeatedly stresses, that his 'attempts' are just meant to be that and meanwhile [for the time being] cannot claim to be anything more important, or more successful, on all sides. [Treu continued] It is Cauer, who beside Siemering, first earned great credit for having broken the ban of a tabu in this almost defamed area through his energetic initiative, also [for having] highlighted the exceptional [nature] of an 'instructive technical trial'. His 'trials', despite all their shortcomings, demonstrate how the colourful blend can contribute to a character which to us, who are not used to polychrome statues, can convey a measured and stylistic crescendo of an ideal form. And therewith much is gained. The gold (even where entirely covered with colour [Cauer], acts as a ground, shimmers through, especially when touched by bright sunlight. This separates the heightened tone from [any] 'vulgar imitation'. Transl. H.H.)

[14] Andreas Blühm, exh. cat., *The Colour of Sculpture 1840–1910* (Zwolle: Waaders Uitgevers 1996), see footnote 67.

[15] Karina Türr, *Sculpturae vitam insufflat pictura: Farbe und Naturalismus in der Skulptur des 19. und 20. Jahrhunderts* (Mainz: von Zabern 1994), p. 243.

[16] Malloy alias Thackeray, *Punch*, 24 April 1851.

[17] See Andreas Blühm, p. 194.

[18] Alfred Gilbert maintained that it is open to the sculptor whether or not he conveys colour, or *couleur*. Close observation and sensitive handling of the material can fuse *couleur* into an image, hence, in realism *couleur* is owed to texture, to identifiable objects, to the tenor in which light and shade are allowed to interact, and not least to depicting a life as lived and understood by ordinary

people. Dalou, in a masterly way, conveyed a sense of colour in his works without ever painting them. Gilbert, during his own career, began by first giving expression to colour by means of modelling; he moved from monochrome *couleur* to polychrome *colorit*, and towards colour symbolism. Realism draws on particulars but symbolism gives universal status to colour.

[19] The tomb, commissioned in 1892 shortly after the death of the duke, was not finally completed until 1928. The finished monument differs considerably from the sketch-model, which is in the collection of the Victoria and Albert Museum.

[20] The revised lecture was printed in a learned journal in 1864, two years after the *Tinted Venus* was exhibited in London during the International Exhibition.

[21] Presented on 5 November 1883 and printed in an extended version in 1884.

[22] Treu's opening remarks, transl. H.H.: "It is a sufficiently proven fact that the entire ancient world (including the Greco-Roman world) and the Middle Ages, have as a rule decorated and enlivened their sculptural works with colour (and that) only during the Renaissance, due to an archaeological misunderstanding, colour was squeezed out. Does that not cause us to be reminded presently of the ancient custom of art and do we not need to ask whether it would not be of benefit if sculpture of our time were, too, to receive again colour? … That most of our contemporaries shudder by the mere postulation of such a question may to some serve as the most applicable answer. If everybody would think like that, this would indeed be it – for the next five or ten years. [Then] if it were true that in matters of artistic creation solely those who live are right, so it nevertheless is just as clear that the living live fast. But we did not wish to take as our object of this lecture a 'problem' belonging to a more or less distant future. Rather, we believe, that for the present generation, which is on the whole realistic and colour-friendly, the question arises, whether sculpture ought not now and then return to a manner of colouring which dominated for thousand of years, and especially during the most brilliant epochs of the art of sculpture. It would thus not be a brand-new experiment, which we would ask of our artists. However, we first of all have to explain in which sense and encompassment, indeed what reasons, we offer the matter for debate. We seek right from the beginnings, if possible, to avert any misunderstanding."

[23] See G. Treu, *Sollen wir unsere Statuen bemalen?* (Berlin: R. Oppenheim 1884), p. 24.

[24] e.g. Ethnic statuary, and also Pierre II Legros's *Blessed Stanislas Kostka*.

[25] *Das Albertinum vor 100 Jahren–die Skulpturensammlung Georg Treus*, eds. Gudrun Elsner, Kordelia Knoll (Dresden: Staatliche Kunstsammlungen Dresden 1994), p. 244.

[26] Heinrich Bulle, *Klinger's Beethoven und die farbige Plastik der Griechen* (Munich: F, Bruckmann 1903), where he comments: "Das Farbenspiel ist betäubend. Hart, ohne Übergang, ohne Zusammenklang steht das alles nebeneinander. Am wohltätigsten noch zieht das warme Gelb und Braun des Mantels an, zudem der Blick wie auf eine ruhige Insel in dieser Farbenbrandung am liebsten zurückkehrt. Aber beissend springen von neuem die Goldreflexe der Lehnen in die Augen, und das schreiende Rot und Blau der Rücklehne saust wie

ein brennendes Farbenband immer wieder am Auge vorbei. So werden wir durch die Farben hin- und hergerissen, aufwärts, abwärts, ohne klare Leitung, ohne rhythmische Steigerung. Und wo bleibt die Hauptsache, der Kopf? Man muss ihn fast suchen. Das Weiss des Oberkörpers ist stumpf; es wirkt, obwohl der Marmor an sich vielleicht einen Stich ins Gelbliche hat, gräulich-weiss im Kontrast zu den umgebenden Farben."

CHAPTER ELEVEN

A MODERN READING OF COLOUR IN SCULPTURE

> I think that modern sculpture of the best kind has been in and out of the idea of the painted sculpture, approaching the point where you can't distinguish between painting and sculpture.[1]

In this final part of the survey on colour in sculpture three themes will be explored. The first is the shift from realism[2] to hyper-realism. Then it is hoped that statements on colour in sculpture by modern artists and critics will round off what began as a major debate during the nineteenth century. Finally, it is from conservators that we shall learn most about polychromy (a topic linking the modern with earlier periods) and the problems arising from caring for polychrome sculptures.

Realism in art is a relatively recent art-historical idea that gained currency first in France during the mid-nineteenth century, when the term began to be applied to a new genre of works of art and literature. Initially Gustave Courbet's paintings were linked with the new watchword *realisme* because of his choice of subject matter.[3] Realism departs from the traditional concept of mimesis, or imitation – such as the imitation by the Romans of idealised Greek statues during the Renaissance, and in particular during the Neoclassical period.

The modern artist who opted for "realism" observed everyday life around him: it had immediacy, and it was direct, unfiltered by either social or artistic conventions. For example, the mother and child theme, traditionally reserved for the Virgin and Child, became a homely scene down to the last detail.[4] The subject lost some of its religious, cultic connotations as it acquired a new context. It became an instance linked to the life of a particular person from within the artist's or viewer's social ambience. In spite of its snap-shot quality, it has full potential to become an *objet d'art*, for the artist relies on his trained eye for catching the fleeting moment as much as the universal truth of motherhood, and also because of its ordinariness when depicted as being part of domestic life.

Two questions need to be asked. Firstly, what is being imitated, or

realised? Secondly, what is the purpose of such an imitation? A third question, which relates more specifically to the subject of colour in sculpture, is what role polychromy plays in realistically modelled sculpture.

The original concept of mimesis is closely linked to the idea of mimicry, meaning to give expression through enactment. During the Dionysian cult in ancient Greece the priest mimicked using dance and music. In art, nature was being imitated. Several ancient anecdotes relate to the fact that painted or sculpted objects appeared so plausibly real that they deceived both human and animal.[5] Thus deception entered into the concept. Indeed, the intention was that by imitating the known a response should be evoked. Herodotus entered into his travel account of ancient Egypt this sobering snippet:

> In social meetings among the rich, when the banquet is ended, a servant carries round to the several guests a coffin, in which there is a wooden image of a corpse, carved and painted *to resemble nature as nearly as possible*, about a cubit or two cubits in length. As he shows it to each guest in turn, the servant says, "Gaze here, and drink and be merry; for when you die, such will you be." [6]

During the course of a conversation, Socrates and Cleiton discussed the life-like quality of the latter's sculptures of runners, wrestlers, boxers and gymnasts. Socrates wanted to know how the sculptor achieved that which most strongly attracts the souls of people who see it, namely the appearance of life. Cleiton conceded that he modelled directly from life and observed the behaviour of the shape of living beings. (The discussion did not disclose whether colouring was necessary to make convincing statues.) Socrates concluded by saying that the sculptor ought to make the manifestations of the soul similar to the outer appearance of the models. Cleiton's response to this was not recorded, but much later a Roman author, Pliny the Elder, exemplified this point. He mentioned an occurrence when the portrait statue of a reprehensible subject was cast in bronze to which iron was added, in order to let the rusting metal resemble blushes of shame, thus depicting the state of the subject's mind.[7]

During late antiquity artistic renderings and imitations of earthly (and heavenly) things were discouraged by some early Christian thinkers – for instance the third-century apologist Tertullian – while centuries later iconoclasts destroyed painted and, especially, sculpted holy images. However, with the rise of humanism during the Renaissance the imitation of nature was recommended in commentaries and treatises, and hence close nature studies began to replace the traditional pattern books. The art

of drawing gained in importance; in fact, drawing came of age. It was Alberti who in his *Commentaries*[8] underlined the distinctness of line and colour. He emphasised that drawing was basic to art. However, he never discussed colour in sculpture.

With the abandonment of polychromy and the emphasis on design, nature came under close scrutiny. More was observed, and much detail was recorded. This encouraged virtuosity in the various crafts. The sculptor, ever more adept in using his chisel or carving knife as if a brush, created images where the manifold textures suggested to the beholder a material reality. Although the tactile surface treatment of a carving remains true to the material and its own colour value, there is a sense of "lushness" conveyed through the imitation of naturally coloured objects. The profuse foliage depicted in a wood carving cannot be imagined other than as being green. Each plant (while identifiable only by its leaves) has a kind of memory colour. Wood carvings by the German sculptor Hans Ässlinger (1500–67) are examples, while the seventeenth-century English master carver Grinling Gibbons (1648–1721) demonstrated with his technique that colour finishes become almost obsolete if naturalistic renderings convey a strong sense of intrinsic colour value.[9]

Parallel to this development were wax works, which were most accurately coloured to assist the medical profession in their study of anatomy and diseases. Anatomical models, and also votive figures, were imitations of actual limbs and organs, or portraits; their function in medical schools necessitated correct colouring, by which any part could be identified easily. Indeed, the colour code of nature has become particularly relevant to the science of medicine.[10] The popular votive figure took mimicry to its next stage in so far as real hair, glass eyes and clothes were added. Moreover, the size and weight of the deceased person were also "incorporated". This type of wax model thus became part of the personal record of the deceased person.[11] From the seventeenth century onwards the making and displaying of wax models representing all kinds of subjects offered diversion and entertainment to people. Wax cabinets were created in France, Germany and, through Madame Tussaud, also in England. The naturalistic portrayals of the famous and the infamous affected the viewer in different ways. In some the senses were excited as if in the presence of a real-life person. Others felt repelled by such close proximity to what they perceived as unsavory or disturbing. This had nothing to do with art, they claimed, nor for that matter with nature as it lacked the breath of life. How was one to define sculpture? The question was as pertinent then as it was later, when the twentieth-century American Duane Hanson, and others, created their hyper-realistic sculptural scenes.

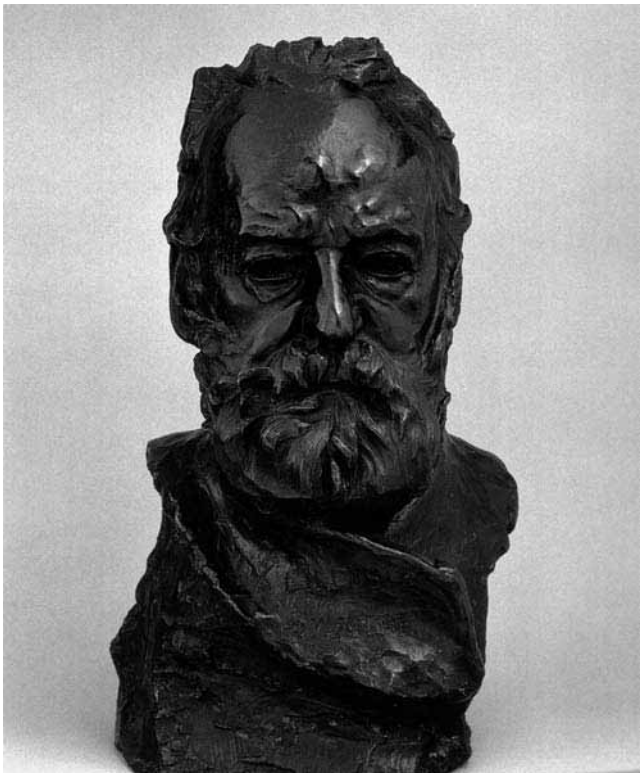

Fig. 11–1 Bust of *Victor Hugo*, by Auguste Rodin, 1883.

To return to Courbet and his contemporaries for a moment, they made realism part of a more just social cause, thereby serving the *ancien régime*. They emphasised the values and aspirations of new classes of society: the workers and the common people. Realism became the burden of the subject matter, through which to define this new realism. In portraying contemporary social life artists created vignettes of domestic scenes, or represented rural or industrial workers as the new heroes of the age. Social realism was absorbed into the genre of realism to which painters, writers and sculptors alike contributed. It is significant that the sculptures were initially monochrome; the terracotta colour and black patina dominated as if in agreement with the drab and tough life in which the people now modelled were caught up. In contrast to this Louis Rochet[12] (1813–78) and Emanuel Fremiet (1824–1920 popularised exotic or foreign subjects. But

Alexander Charpentier (1856–1909) and Jules Dalou (1838–1902) created many quiet, intimate scenes of family life, whereas Constantin Meunier (1831–1905), and also Dalou, focused on the labourer. Like the black print of the daily journals, the sculpted objects took issue with events at work and in the home. All is minutely recorded, but without any direct reference to colour, the quickener of life.

We have seen that in naturalistic sculpture colouring is not conditional, but accurate and detailed form is. A figure which has been realistically modelled and painted closes in on the spectator's freedom of imagination and sense of judgement and, in some instances, even on his perception of the truth.

From the late 1960s American sculptors, two in particular, produced three-dimensional scenes with figures which represented and were instantly recognisable as types of certain social groups, their activities or their behaviour. They convey an immediacy of instances similar to the typical colour snap-shot of everyday events. Duane Hanson (1925–96) and John de Andrea (b. 1941) both worked in polyester and fibreglass. Glass eyes, hair, clothing and accessories complete their carefully painted fibreglass casts, matching every shade of the skin colour against that of the model. The colouring is used mimetically for it imitates all nuances of a body processed by ageing and environment. The sculpted image becomes a complete record of a person's chromatic aspects. *Aileen* by de Andrea (1987) and *Derelict Woman* (1973) by Hanson are hyper-realistic works. It is not just that they are life-casts; they represent something of modern life, and in particular in Hanson's case low-life culture, which it is hard to take. Hanson once claimed as follows:

> I do not duplicate life, I represent human values. My work is about people, who live quietly in despair. I demonstrate [a kind of] helplessness, fatigue, aging, frustration. These people cannot cope with today's competitiveness. They were passed over, they are psychologically burdened. … These sculpted people also live in our world and show the same resignation, emptiness and loneliness; they are part of the American way of life.

The ugly reality represented in Hanson's early works owes its impact to the handling of colouring gory and raw subject matter, akin to some creations of make-up artists in film studios. Hanson's sculptural scene *Bowery Derelicts* (1969) reeks of abject life although his assorted shoppers and tourists are no more comfortable to look at than his scenes of accidents or of social failures. These ordinary folks, deprived of taste and constraint, cause embarrassment, unlike the sculptures by John Ahearn (b. 1951), whose colourful black Americans make cheerful subjects because

they convey ease and joviality. George Segal (1924–2000), a close contemporary and fellow countryman of Hanson, was also interested in stage-setting a slice of life, but his works are often in either white or a satiated blue or red. The monochrome scenes allow the viewer to be detached – or perhaps bemused, as by Roy Lichtenstein's cleverly camouflaged *Blonde*, seriographed in the manner of his raster-printed paintings.

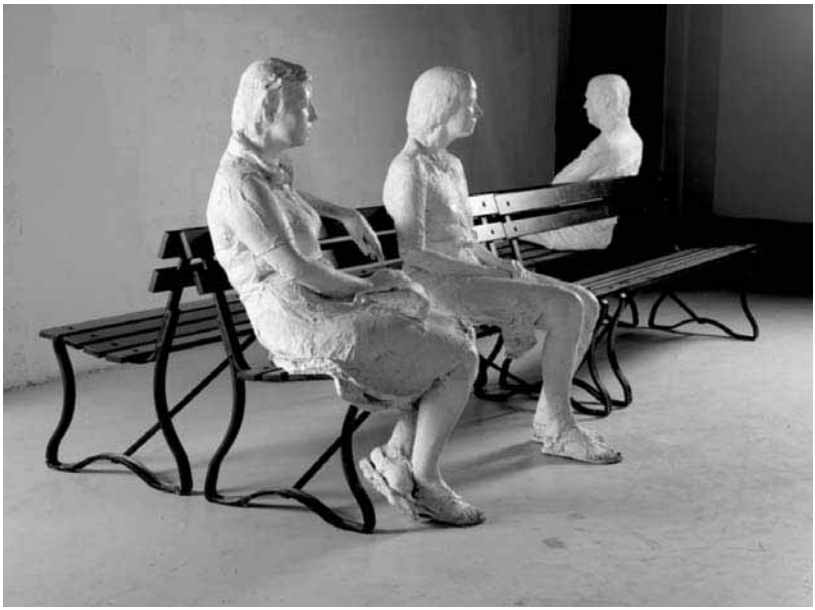

Fig. 11–2 Three plaster-casts of persons sitting on four benches, by George Segal.

Hanson's early works expose the vicissitudes of life. They not only shock our aesthetic sensibility; many of these pieces are a calculated moral affront. Art objects serve our cultural memory, yet what is there that is "cultural" or what kind of "cult" are we reminded of? It is their polychromy that makes these sculptures look unnervingly real. One wonders what the sixteenth-century Spanish painter Pacheco would have made of these latter-day saints, outcasts of any celebratory cult or tutored culture.

Compared with a typical sixteenth-century Spanish polychromed statue, Hanson's casts qualify for colouring on grounds of the material they are made of: Polyfilla™, resin and fibreglass – which, like wax, have

almost no body colour of their own. Colour adds visibility. This problem could have been resolved by simply adding some kind of colorant to the Polyfilla, perhaps a bronze colour or a flesh tint. But this was neither Hanson's nor de Andrea's intention. They wanted to convey the models' "true" colouring and their exact shapes; they concentrated on physical attributes that make somebody the person he is. For this reason Hanson also needed the clothes people wore, reflecting their wearability and the taste people have. Each figure complies with tangible data to be included in a social history.

While Hanson relied on a person's emotive baggage for creating his hyper-realism, de Andrea employed mimetic colouring for his momentarily "frozen images", a stance familiar to drama students. No particular role has been assigned to his models, except that they all are very attractive and chosen for their beauty. One may feel tempted to see in de Andrea a modern-day Pygmalion; his figures glow with life, and seem about to breathe.

Since Gibson presented his *Tinted Venus* and de Andrea made his figure *Aileen*, many ideas and their variants have been tried out in figurative polychrome sculpture. During the span of more than a hundred years the public experienced a radical swing from seeing a classical subject (now tinted but still safely on a pedestal within an alcove, its sacrosanct space) to seeing cast and painted figures which occupy people's space and sentiment and test their sense of reality. A host of sculptors contributed to this development by adding their version of a coloured figure or bust, but in retrospect we recognise in those works a variation on a theme. This is even more evident as we view small-scale sculpture produced during the early part of the twentieth century, for that had often to satisfy current trends and fashions.[14]

The chryselephantine figurines constitute a special class of small-scale luxury object that reveal the narcissistic fascination of high society with its own culture. These drawing-room objects were often made of several materials, notably ivory, that had flooded the market by the end of the nineteenth century. The colour contrast of black and white, with encrustation of gems, reflects to some extend the fashion of the time as imitations of a chic society which knew, consumed and lived in luxury typified by these figurines. In twentieth-century sculpture the role of colour is harder to define as painting and sculpture sometimes overlap, and sculptors turn painters while painters make sculptures. These artists were often pressed for their opinion or felt strongly enough to state what they thought about current developments. It is thus that more statements about colour in sculpture were made by practising artists and their critics than

during any previous period when polychromy was part of sculpture-making. Twentieth-century art needed explaining, often defending, as it was frequently subjected to fierce polemics. The aspect of colour in sculpture is no exception. The following selection of remarks on this topic was chosen, not because they necessarily represent modern sculpture but because they help widen our discourse about what colour can or cannot achieve in sculpture.

The American sculptor and critic Sidney Geist (b. 1914) was drawn into a discussion on colour by eight painters at the Artists' Club in New York months after his own show of painted sculpture. Years later (1991) he published some of the ideas that had emerged then, and since, on the subject in an article "Color it sculpture".[15] He focused firstly on the kind of questions raised, then discussed the varied colour applications that were noted, which will be given here verbatim:[16]

> The efflorescence of coloured sculpture which we are witnessing is only about six years old. Not unified by any school or theory or art (except for those manifestations known as "pop"), it constitutes a new category whose outlines are indistinct and whose origins and purposes remain undefined. The critic of this new sculpture may well ask a number of troublesome questions. Does not all sculpture, by virtue of being material, have color? Does a touch of color, or the use of subtle or quiet color, qualify for the title of colored sculpture? What is the relation, in a construction, between colored materials and applied paint? Is a sculpture painted all blue more "colored" than a white marble? Do the mottlings and rust of welded sculpture qualify as color? Is painted sculpture a new category or a confusion of categories? Is it distinguishable from what might be called sculptured painting?

Without going into these questions here, let us move on to the list of colour application mentioned by Geist. Practically all of these applications will be recognised as having featured during periods described in earlier chapters. What is different is, of course, their context that derives from artists' different preoccupations owing to the subject matter, materials and creative context. Yet different technical or visual problems are still overcome through familiar technical means – that is, colour application – in order to:

> demarcate forms already indicated in the sculpture; to create forms where none are indicated in sculpture; to separate parts from the whole; to unify the parts; to neutralise the materials; to deny, oppose or absorb form, which can be used to distort form seeming to create prominences where none exist, and suppress those that do exist.

Geist also refers to "a kind of negative color that jars our color sense" and quotes George Segal's white plaster figures in real settings, and also Claes Oldenburg's white facsimiles of familiar objects in cloth; however, Oldenburg has also, in Geist's opinion, "brought a well-developed expressionist color-sense to sculpture. His form remains readable under his bold and painterly application of color because of the familiarity of his subjects".[17]

Colour may be employed to create a psychological effect, for it may evoke a mood or sensation. The trompe-l'oeil effect by Jasper Jones with his *Painted Bronze*, which is a bronze cast of a can and brushes painted in imitation of the originals, challenges the traditional concept of "truth to material". Yet the trompe-l'oeil effect was much applied during the Baroque period in Bavaria and Austria. Of course, colour can also be used as an adornment; then it becomes an interesting addition. This is certainly not a new discovery made by modern artists, for the decorative element of colour is as ancient as is any other visual expression.

Sidney Geist's own "recent preoccupations" with colour in sculpture are interesting, for here we enter into the mind of a practising artist who has painted his sculpture for many years and, as he acknowledged, for many of the reasons noted above. He explains:

> My colour was always bright and hard because I decided early that I did not want a time-worn, patinated surface; I thought that a new piece of painted sculpture should look as new as a Brancusi. This brightness often had a shocking public effect; what surprised me was that it often had a humorous effect too, and that may well have been caused by a union of serious form and gay color. … My solution at the moment is to suppress my designing instinct to make a mute form, a kind of un-design, which is only fulfilled or justified by the addition of color. I make what amounts to a space that calls for color … [18]

Geist, well aware of the transient nature of contemporary art, brought his own optimism and enthusiasm to the "vexed question of colour in sculpture", a phrase borrowed from another art critic, Clemens Greenberg. In Geist's opinion "sculpture [was] on the way to regaining the easy commerce it had with color before the Renaissance". The British painter Patrick Heron was however less optimistic when he commented in 1970 that "painted sculptures leads up to a *cul-de-sac*".[19]

By the end of the 1960s a number of young British sculptors, who all worked in a non-figurative mode, had one particular interest in common: colour in sculpture. They knew each other from their time at St Martin's School of Art in London, where they either had studied or taught. Anthony Caro, Phillip King, Tim Scott, David Annesley, and also William Tucker,

Isaak Witkin and Michael Bolus, gave sculpture its new bright look, and so did William Turnbull and Eduard Paolozzi, who graduated from the Slade School of Art.[20]

During a discussion between King, Scott, Annesley and Turnbull on colour in sculpture (printed as statements in *Studio International*), Tim Scott said he thought that colour in sculpture could be categorised as follows: descriptive; enveloping; expressive. He then explained this:

> historically, colour was used in order [to record] detail, with an illusory aim. With the advent of the use of industrial materials, it has served and serves the purpose of providing a skin envelope of a unifying character. It is the last category, the use of colour as an extension of the expressive power of shape and volume, that is of particular concern; indeed, I feel it to be, with the extension of the concept of sculptural space to be ground surface, a principal area of innovation …
>
> The use of colour surfaces in sculpture is an expression of the continuing awareness of surface as texture, a tradition reaching directly to us through Rodin and Brancusi. The fact of the actual textural variety of surface application of colour, both in the application of pigments and finishes, and in the use of self coloured material furthers this … Surface is the vocabulary, the means by which sculpture is "read", and what takes place is a broadening, a reinvention of that vocabulary. The gamut of colour used in relation to shape is descriptive of ranges of mood and intensity, and in this respect bears much resemblance to the use of the term in musical definition.[21]

In 1968 Phillip King had this to say about colour in sculpture:

> Colour is probably the most fragile aspect of the world of things, where qualities of weight, volume and texture would seem to dominate. Yet it is this very fragility that makes it important for me. … Sculpture is concrete, this I accept and even confirm when I make it, but to isolate that fact and dwell on it would seem a useless exercise tinged with the same kind of absurdity that marks the false heroism of city monuments. … Sculpture is, I believe, also the art-form where the unseen aspect of things is most clearly and sharply expressed, unlike music where the unseen is vague and undefined. Rodin's talk of geometry planes and volumes makes sense when one feels the internal invisible goings-on behind the surface. It is always what goes on behind the surface or in front that matters more than what is on the surface itself. … Colour for me is the life-line into this invisible world where feeling takes over from thinking and without the experience of which one's sense of reality in art would be false and diminished.[22]

The much interviewed Anthony Caro has made many statements about

his work. The question regarding the colour of his sculptures is never far from the mind of the interviewer. And depending on during which phase of his career he is asked about, he finds himself revising a previous statement as his attitude towards colour in sculpture is changing.

His early metal constructions glow in bright yellows, blues or red. He was usually advised by painters about the "appropriate" colouring. His wife, the painter Sheila Girling, played her part in this respect. He once remarked that colour was a freeing agent,[23] and that he added it after the sculpture was otherwise finished – like a title, to suggest the mood. Often the titles of his sculptures come from the commercial names of paints used (e.g. *Deep Body Blue*). Caro went through a phase when rust became his preferred finish (e.g. *Xanadu*). During the 1980s colour acquired for him a utilitarian function. The non-distinct colour of the paint had to unify the parts without drawing attention to itself. The paint, however, also masked the natural colour of the material, thus overriding the prime colour code of the metal sculpture.

Back in the 1940s and 1950s the American sculptor and painter David Smith (1906–59), to whom Caro owed more than the residue of his metal yard, sometimes treated the surfaces of his sculptures like abstract paintings. The results were rarely satisfactory. Colouring sculpture, whether in a painterly manner, multi-coloured or uni-coloured, sometimes springs surprises, particularly if the environment for which the piece was intended is incompatible with the chosen colour scheme.

It is perhaps not surprising that the original colouring of quite a few of the constructed modern sculptures was later revised by the sculptor and repainted with another shade. Smith, Paolozzi, King, Caro – all confessed at one time or other to the need to reconsider their first choice of colouring, although it seems extraordinary to the public that a green piece of sculpture can at the bat of an eyelid be made to look red (King's *Slant*), as if slipping on another shirt or dress to satisfy taste or requirement. This in fact is what conservators frequently discover when analysing the paint layers of polychrome medieval statues: the polychromy has often been adapted to the taste of the time of restoration. It may be premature to ask how future conservators will decide on a problem of deterioration of an "intentional rust finish" by Anthony Caro or Richard Serra.

*

The Belgian art historian Michel Philippot wrote in 1988 that it is thanks to conservators that a continually growing amount of information about polychrome sculpture becomes available and gets published. To this

has to be added that since then some major exhibitions and well-presented exhibition catalogues have opened up the subject to the general public.[24]

The importance of conservation and restoration to our understanding of early polychrome sculpture is being repeatedly stressed, especially by conservators who are uniquely placed to study closely every minute physical aspect of works of art.[25] Our knowledge relating to polychromy has expanded over the years and with that has come the urge to stem any further loss of information vital to a work's iconography and its correct reading. Often only samples of pigment and their scientific analyses will provide vital evidence regarding the work's history. These, together with archival material, are essential. Contracts, legal documents and guild by-laws form a rich vein of knowledge.

The main problems that have been identified[26] are in the first instance of a technological nature, like the flaking off of colour. The second type is cultural, such as overpainting. Successive layers of paint often correspond with the taste of the time – such as a Baroque layer over a Gothic overpaint over a Romanesque original. The third type of problem is the surprises – that is, features that emerge which were suppressed or misinterpreted during the course of time. For example, an early thirteenth-century crucifix (Biberach, 1220) had closed eyes, but after freeing the original paint it was discovered that the eyes were initially open. Stylistic details such as side wounds, tears and flagellation marks were often lost as those no longer agreed with a later ideology. Other surprises are actual colour changes (e.g. blue instead of red) or that during a later restoration there may have been some economising on expensive pigments or time, so that gold or a particular pattern (e.g. pomegranate) may have been painted over. Thus, a polychromed image may look quite different from its former state after being cleaned and treated.

The statistics of conservation tell their own tale. A late Gothic statue by Hans Multscher (*c*. 1437), known as the *Landsberger Madonna*, was for over three centuries part of a Baroque architectural setting. Up to the present date the figure has been polychromed six times; altogether twenty-eight layers of various kinds were noted. Some were underpaintings, others final glazings. Because of the complexity of layers a scheme had to be devised in order to help the conservator keep track of the several restorations. This bank of information is supported by photographic documentation, graphic representations and text. The difficult conservation project made interdisciplinary team-work essential.[27]

An interim report on an even more extensive conservation programme stated that during the eight years since work began on the restoration of the *Wiener Neustadter Retabel* in St Stephen's Cathedral in Vienna over

3000 working hours at a cost of 2 million Austrian shillings were spent. Twenty per cent of the cost was met through sponsorship. In 1993 the art-historical and iconographic problems were discussed and published. The archival documents revealed that before 1886 the altarpiece was neither specially cared for nor in any way restored. It remained untouched for four hundred years. From 1870 reports commented on the urgent need to have it restored.

The abstract of the full report of yet another major restoration programme, the Herlin Altarpiece (1466), is worth mentioning here for it tells us of the organisational complexity of such a task. It stated that all aspects were examined by the conservator on receiving the polychrome sculpture for the purpose of restoration. The Herlin Altarpiece is complex, and the task for the conservators involved is complicated. Two separate reports were published. The first enters into the problem of the altarpiece as an art-historical object and discusses the proposed scheme of restoration and its implications for the work in hand. It includes studies of the origin of the altarpiece, past attempts at restoring the complex piece, attempts to sort out the assembly of the various structural parts, the polychromy of the altarpiece and various decorative elements that were observed. The other report covers the scientific examination of the altarpiece. This included micro-chemical analysis of pigmentation, translucent paints, gilding and so forth. The results were presented in the form of tables.

In 1982 one of the first attempts was made to analyse the colour shifts that occurred during a period of two hundred years (1600–1800).[28] The work was based on altarpieces selected from a geographical region which contributed to the flowering of the Baroque. The analysis included two tables that show the span of time when the various colours were used, indicating their combination with either the figures or the framework of each altarpiece. The map provided conveys at one glance the topographical distribution of workshops responsible for the polychromy of altarpieces within a specific area of Austria. This shift in colour application is also indicative of a shift regarding intention.[29]

The conservator Manfred Koller, who wrote the report, observed that it is significant that polychromy, as a concept as well as a research interest, appears to be a central European cultural phenomenon, and that it is rooted in particular in German-speaking countries and also in Spain, where similar interests exist. However, it is only in recent times that it is receiving attention. He concluded that during the post-medieval period polychromy has had recognisable topographical and national peculiarities that can be related to social conditions and motivations.

Modern conservation techniques concur in one particular respect with

those of archaeology: the stratification of layers over the core material and their sequential readings and interpretation. For the conservation report of the *Christ* figure mentioned above, a diagram was produced showing a cross-section of the successive layers. For the loin cloth the following reading was obtained: wooden core of the carving, *c.* 1220: white ground, red paint; fifteenth century: brown colouring, white ground, brown layer, purple undercoat, blue paint; *c.* 1655: white ground, white paint; *c.* 1820: grey ground, white paint; *c.* 1860: white ground, white paint. The brown paint applied during the fifteenth century covers the entire body. This is interesting in view of a new trend towards monochromy or partial polychromy (eyes, mouth) during the pre-Reformation period. A prime example is the late medieval sculptor Riemenschneider, who changed from full polychromy to partial colouring ("wood-visibility").

Another problem which conservators occasionally encounter is related to colour and its possible changes. A colour's instability may, of course, falsify the visual document. Two things may happen: the pigmentation disappears as its binding agent dissolves or otherwise impairs the adhesion of pigments to the body of the sculpture; or the colour undergoes a chemical change which may alter the original colour value. This was observed when five hundred sculpted fragments that once belonged to large Gothic sandstone figures which were found in the vicinity of the Berne Minster (Switzerland) were analysed. They were buried after the sculptures were destroyed in 1528 during the first wave of iconoclasm. Though the fragments cannot be pieced together again, they are still useful as samples. The preliminary study showed that the technique of painting on sculptures has much in common with the technique of contemporary panel painting. Beside this stylistic confirmation, pigment analyses have proved that the blue pigment azurite changed into tenorite, a conversion which has been noticed on wall-paintings in Switzerland and elsewhere (e.g. Winchester).

In a study relating to the polychromy of archaic Greek statuary, the archaeologist Valentina Manzelli[30] provided statistical information regarding the preferential usage of the colours on 230 sculptures. From this study it emerged that red was the most frequently applied pigment (94%), followed by blue (29%) and then black (21%). Green was found on only 17 per cent of the objects examined, yellow was even more sparingly used (12%) and white featured only on 6 per cent of all painted sculptures. Another graph she provided exemplifies the relationship of one colour to another when applied to the chitons worn by the *korai* and divinities. There, 57 per cent of the paint was red, 43 per cent blue. Manzelli, while summarising, was wondering whether the colour scheme in archaic Greek

art had any meaning beyond being just a decorative or naturalistic finish for the object. Why, she queried, were certain colours used in preference to others in particular contexts and in rhythms and recurrent associations?

This raises a much wider issue, namely intentionality. What intentions can be read from polychrome sculpture? Was the colour scheme the choice of the one who produced the work or was this choice, whether and how to polychrome, a matter determined by social and cultural conventions? Any convention points to a code of common practice with common intent. An individual comes to a certain way of doing things by being trained, by mastering a style, but it is excellence that often breaks with convention.

A sculptor brought up in seventeenth-century England, as was Grinling Gibbons, was not trained to envisage sculpture being finished by applying paint to it. This, in Gibbons's case, affected his personal style for he concentrated on naturalistic features of form that compensated for the absence of colour. Monochromy was however a deliberate choice during the Renaissance and in post-Reformation societies with a strong leaning toward puritanism. Gibbons, because of his virtuosity as a carver, helped to establish the monochrome image as a valid form of expression. The intention of the time to eradicate polychromy was worked out in a practical manner by demonstrating the advantages of monochromy.

On the other hand, two or three centuries earlier the medieval wood carver was working with a polychrome image in mind although he himself was not necessarily included in the final stage of finishing the product. Polychromy was the responsibility of the painter, who took the lion's share of the credit for effort. But he was no less at liberty with regard to the manner of colouring, for this was settled when the contract between the patron and the master of the workshop was drawn up. And yet, the artistic process is also part of this pattern of intentions for, with each selection of a tonal value or area to be covered with a colour, the artist is trying to match his achievement against his perceived intention.

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In this survey many ideas have been explored and discussed regarding the phenomenon of colour in sculpture. We have been looking at different cultural backgrounds and have studied types of sculptures and variations of colour application. We noted that sometimes colour was wanted to satisfy greater realism, while at other times colour symbolism was the decisive factor in introducing colour into sculpture. At this stage we have to revisit a fundamental question: is colour essential to sculpture?

When discussing Greek sculpture on its own we had every reason to

conclude that colour played an essential role, despite the fact that in modern times it has been debated whether there was any colour at all. However, Renaissance and Neoclassical sculptors, and also many twentieth-century sculptors, categorically denied that colour is essential to sculpture and tried to prove it.

If we accept that colour is essential, then, it is only on the grounds that it is necessary in certain situations. The strongest claim arises when colour symbolism is introduced into sculpture. Ancient Egyptian and medieval Christian sculpture are indebted to colour symbolism. Despite the fact that naturalism in sculpture is often presented in monochrome form and therefore perceived as opposed to polychromy, this is not true in the history of polychromy. In the Riace bronze figures and Duane Hanson's sculptures, colour features as a characteristic of realistic representations and thus the colour is essential. The claim that something is essential must cover the general concept rather than single instances. Perhaps we ought to ask "Essential to what?", which relates to the essence of sculpture-making, whereas if we ask "Necessary because?" we are enumerating instances when indeed there is a perceived need for colour in sculpture. Sidney Geist has already given us a list of such needs. But are these just instances when colour is given a role to play as if of essence to sculpture in general or to a particular piece of sculpture?

Let us look at two other concepts relevant to colour in sculpture: the acceptable and the intentional. They are of interest because of what their negative counterparts, the unacceptable and the unintentional, reveal.

To the Neoclassicists polychromy was unacceptable. Colour was not just ignored but rejected. To the chromoclasts during the pre-Reformation period and to the puritans polychromy was also unacceptable; white-wash was their answer to the problem. But it is difficult to think of colour in sculpture, or for that matter monochromy, as unintentional. The presence of colour in polylithic or acrolithic sculpture is intentional; the same is the case when statues are dressed. Materials for sculpture-making are usually chosen with great care and their intrinsic colour is often shown to its advantage. The preference shown for white Carrara marble during the Renaissance was one way of circumventing all references to chromatic values.

When is a piece of sculpture finished? Traditionally colouring or gilding or polishing were the final stages before completion. This was then the accepted, unalterable version; the changes due to later restoration efforts have to be viewed separately from the original intention. Patina has, particularly in modern times, been added as a desirable finish as it has become possible to speed up the process chemically and to achieve many chromatic variants.

In the past the original colouring, or polish, has been considered integral to the creative statement. The finish in modern abstract sculpture is often perceived as a permutant. Alterability, at least of colour or surface quality, is being accepted as part of the continuing creative process. The difference however is that it is not an ageing process, or a mellowing, which is wanted but an intended influence as to the way a sculptural configuration is being perceived under changing conditions. This does not only apply to modern art but, as a Victoria and Albert Museum poster of Canova's *The Three Graces* shows, monochrome sculpture may be made "palatable" by beaming coloured lights onto its white marble surface.

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The historic perspective of colour in sculpture, while yet only an outline, has already shed some light on how a people or an age viewed and applied colour. To early civilisations colour had a supernatural quality. This we know from various sources. Egyptian polychrome sculpture and ancient texts verify this aspect.[31] Colour symbolism occurs whenever there is a cultural need to express an affinity with the supernatural, and polychrome sculpture is one of its expressive means. Of the ancient Greeks it is said[32] that they were more concerned with saturation and brightness than with subtle hues, and without much reference to naturalism. Fairly "loud" colours were used lavishly on most of their statuary, but by the time of the Augustan period[33] moderation in the use of pigments had occurred. During the early Middle Ages colour symbolism was once again essential to image making. Colour symbolism is independent of natural colouring. Was this why it was observed that "What seems characteristic for the polychromy of the twelfth century is its irrationality of colouring"?[34]

It seems equally irrational now that twice in the history of sculpture it was scholars steeped in classical learning rather than practising artists who insisted that colour must have nothing to do with sculpture. In pursuit of an ideal based on false ideas about past intentions, they dissolved the union between painting and sculpture. Ironically, twice (in the Renaissance and Neoclassicism) a denial turned into an affirmation; monochromy gained acceptance as an alternative to polychromy.

Yet can there be an alternative if we accept Michel Pastoureau's concept of the function of colour? Colour is there to classify, to associate, to oppose, to design, to establish a hierarchy. Colour stratifies and organises one's whole life, social and mental. Colour articulates space and time, co-ordinates various forms of knowledge and creates out of itself

systems, echoes and accents of the entire nature. Colour is always an art of the memory. It is therefore the memory of the past that is being rescued when every trace of colour on sculptures is noted and preserved. Even ghost-patterns left on a marble figure by pigment formerly applied to it are important. And this invites the question of whether, for instance, the ancient Egyptians painted their hieroglyphs (which they had carved into stone) to use the colours as mnemonics rather than for merely decorative purposes? If so, they would have had to evolve a system or a colour code which was fairly consistent in its application.[35]

As with any survey, here the intention has been to gain an overall view of the many aspects and their relationship to the subject area set out. Sculpture-making has a very long history and so has the role colour plays in defining and relating to sculpture. Each age, each culture, every maker of coloured sculpture, added to the diversity to which the viewer is introduced. This field is indeed overwhelmingly complex. But the advantage of a topographical survey lies in gaining a better understanding of the prominent features and of any pattern distribution. Colour shifts, colour combinations, colour areas, new colours, colour qualities in sculpture are all indicative of intentions, and these in turn of social interactions, human activities, capabilities, perceptions and needs.

Notes

[1] Eduardo Paolozzi, interview by Richard Hamilton, *Arts Yearbook 8: Contemporary Sculpture*, New York: Art Digest 1965), p. 619.
[2] cf. P. and L. Murray, *Penguin Dictionary of Art and Artists* (London: Penguin 1997); article on "Realism".
[3] Everyday and work-related themes depicting the poor.
[4] e.g. Alexandre Charpentier (1856–1909), *Young Mother Suckling her Infant.*
[5] Pliny the Younger offers a graphic example: Myron (480–440 BC) sculpted a cow that appeared so real that it deceived other cows in the meadow.
[6] Herodotos, *The Histories* (2.78); author's italics.
[7] Göran Sörbom, *Mimesis and Art: Studies in the origin and early development of an aesthetic vocabulary* (Stockholm: Svenska Bokförlaget Bonniers 1966), p. 85.
[8] Leon Battista Alberti, *On Painting and on Sculpture, with Notes by Cecil Grayson* (London: Phaidon 1972).
[9] Alfred Gilbert (1854–1934) maintained that it is open to the sculptor whether or not he conveys colour or *couleur* . Close observation and sensitive handling of the material can fuse *couleur* into an image; hence in realism *couleur* is part of texture, and enables identification.
[10] e.g. There are currently more than two hundred fully coloured medical atlases which show the anatomy and function on the dissected body.

[11] The Romans made wax imitations of the deceased as part of their ancestry cult. Dressed up in the dead person's clothes, the wax figures became part of funeral cortèges.
[12] e.g. Louis Rochet, *Monument to Don Pedro I of Brazil* (1855–62); Emmanuel Fremiet, *Gorilla Carrying off a Woman* (1887).
[14] Victor Arwas, *Art Deco Sculpture: Chryselephantine statuettes of the twenties and thirties* (London, Academy Edition 1984), p. 12. "Chryselephantine figures were not considered as works of art but as decoration by the critics of their day, who tended to suffer from the debilitating disease of 'good taste'."
[15] Sidney Geist, "Color it Sculpture", in *Contemporary Sculpture: Arts Yearbook 8* (New York: Arts Digest Inc, 1965), pp. 91–98. Geist acknowledged the long tradition of polychromy up to the Renaissance, and a newer tradition when "truth to material" predominated. However, his commitment to modern art begins for him, in this instance, with a "period marked by revolutionary inventiveness [when] Picasso, Archipenko and Laurens in Paris made coloured sculpture, as did some members of De Stijl and the Russian modernists". He then cited a string of names, mostly Americans, who contributed to the colour phenomenon in sculpture before the mid-century – for instance Alexander Calder with his brightly coloured mobiles. Geist then evoked a panoramic scene of coloured sculptures as he recalled (in alphabetical order) Arnold, Beal, Bladen to Oldenburg, Smith and others, and finally Zogbaum. Thus he had, with one broad brush stroke, laid out the problem, and the questions, that he then raised.
[16] cf. *Primary Sources: selected writings on color from Aristotle to Albers*, ed. by Patricia Sloane (New York, NY: Design Press, *c.* 1991), pp. 218–224.
[17] Ibid., p. 222.
[18] *Studio International*, Vol. 180, Dec. 1970, p. 162.
[19] William Turnbull and Eduardo Paolozzi made a career in painting and sculpture with the inevitable cross-over between the two media. In 1965 Paolozzi remarked in an interview with Richard Hamilton: "I think that modern sculpture of the best kind has been in and out of the idea of the painted sculpture, approaching the point where you can't distinguish between painting and sculpture, where they cross over in an original way. This would be the goal for me", *Arts Yearbook 8*, pp. 160–163.
[20] cf. "Colour in sculpture: statements by Philip King, Tim Scott, David Annesley and William Turnbull", in *Studio International*, Vol. 177, no. 907, Jan. 1969.
[21] Ibid.
[22] Phillip King, Statement, in "Colour in sculpture", *Statements by Phillip King, Tim Scott, David Annesley and William Turnbull, Studio International*, Vol. 177, no. 907, January 1969, pp. 21–24 (p. 21).
[23] Anthony Caro's interview with Sarah Hamill at the National Gallery, London in 1977. Published as "Polychrome in the sixties: David Smith and Anthony Caro", in *Anglo-American Exchange in Postwar Sculpture, 1945–1975* (Los Angeles: Getty Publications, 2011).
[24] *Colour of Sculpture 1840–1910,* ed. Andreas Blühm (Amsterdam: Van Gogh Museum 1996), Henry Moore Institute, Leeds, 1996/7; *Bunte Götter*, eds. Vinzenz Brinkmann and Raimund Wünsche (München: Glyptothek 2003), 2003/4; *The*

Color of Life. Polychromy in sculpture from antiquity to the present, ed. Roberta Panzanelli, Malibu: The Paul Getty Museum 2008).

[25] Leon Smets, "Polychromy: notes on the technique. conservation and restoration of polychrome sculpture", in *Late Gothic Sculpture: The Burgundian Netherlands*, ed. John W. Stevaert (Ghent: Museum Voor Schone Kunsten 1994).

[26] Johannes Taubert, *Farbige Skulpturen: Bedeutung, Fassung, Restaurierung* (München: Callwey 1978).

[27] Margret Struve, "Die Landsberger Muttergottesskulptur: Gedanken zu einer früheren Restaurierung", in *Restauro*, no. 98 (2) (1992), pp. 102–107.

[28] cf. Manfred Koller, "Fassung und Fassmaler an Barockaltären", in *Maltechnik-Restauro*, no. 88 (4) (1982), pp. 157–172.

[29] The time-frame includes the 1784 reform movement initiated by Emperor Joseph II. See above Chapter 10, p. 255.

[30] Valentina Manzelli, *La policromia nella statuaria greca arcaica* (Rome: L "Ema" di Breitschneider 1994), p. 294.

[31] cf. Ebers papyrus, an Egyptian medical papyrus of *c*. 1550 BC kept in the library of the University of Leipzig.

[32] cf. H. Osborne (1968), "Colour concepts of the ancient Greeks", in *BJÄ*, no. 8, p. 269.

[33] The reign of the Emperor Augustus, *c*. 43 BC to *c.* AD 18.

[34] *RDK*, ed. Otto Schmitt, Vol. 7, column 794. http://rdk-web.de

[35] Although the colouring of hieroglyphs has been studied on a selective basis, it is not clear whether a reliable memory code may be deduced from it.

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